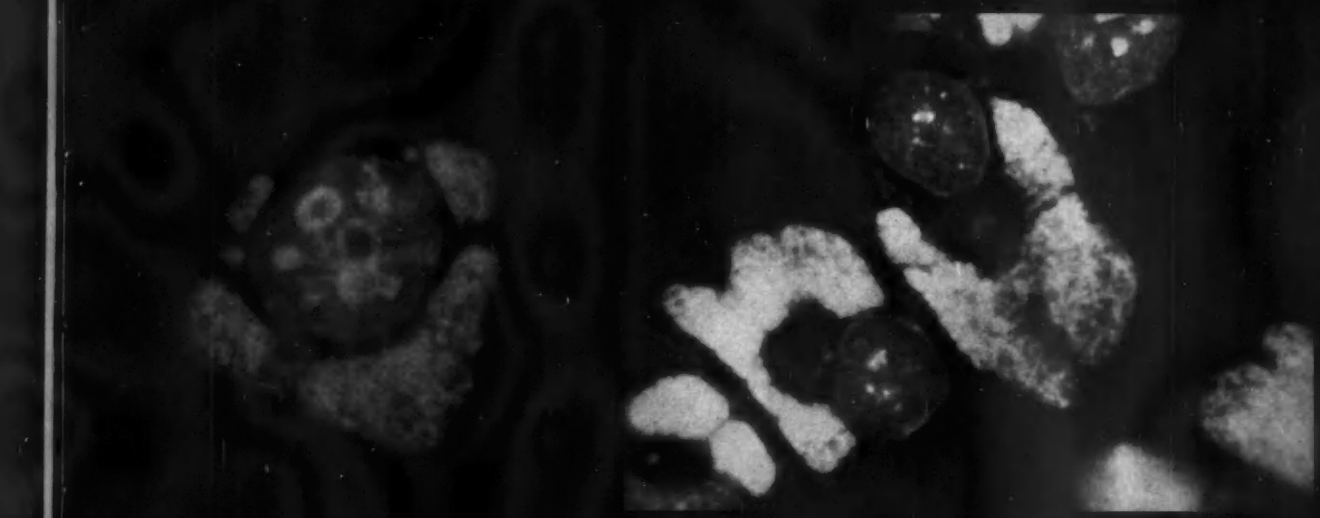
MEDICAL WORLD NEWS

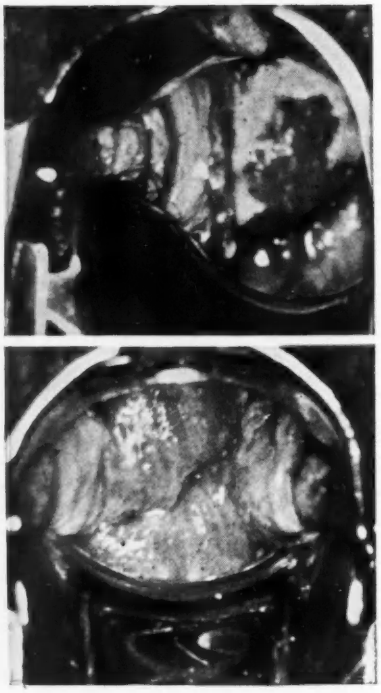
JULY 7, 1961

LIFE AND DEATH OF A VIRUS



MEDICARE: Charge and Countercharge

One-Shot Prophylaxis Tested for Rh Mothers



monilial vaginitis

A COMMON PROBLEM INCREASING YEAR BY YEAR[1]

Candidiasis is especially serious in diabetics... during pregnancy... in the debilitated... and when broad spectrum antibiotics have been administered in high dosage, with or without concurrent administration of cortisone or related steroids.

Clinical Results: In 26 patients (11 pregnant) with vaginal moniliasis, treatment with Mycostatin Vaginal Tablets was completely successful in 92% of cases. Marked to moderate improvement was shown in the remainder.[2]

In a series of 59 patients with candidiasis (31 pregnant), intravaginal therapy with Mycostatin proved 100% successful in the pregnant patients; similar response was shown in 96.3% of the non-pregnant cases.[3]

Supplied: Each Mycostatin Vaginal Tablet—individually foil wrapped, contains Mycostatin, 100,000 units, and lactose, 0.93 Gm. Packages of 15 with applicator. Also available: Mycostatin Oral Tablets... Ointment... Dusting Powder... Powder for Suspension... Cream.

References: 1. Lee, A. F., and Keifer, W. S.: Northwest Med. *53*:1227 (Dec.) 1954. 2. Caruso, L. J.: New York J. Med. *58*:1688 (May 15) 1958. 3. Pace, H. R., and Schantz, S. I.: J.A.M.A. *162*:268 (Sept. 22) 1956.

For full information, see your Squibb Product Reference or Product Brief.

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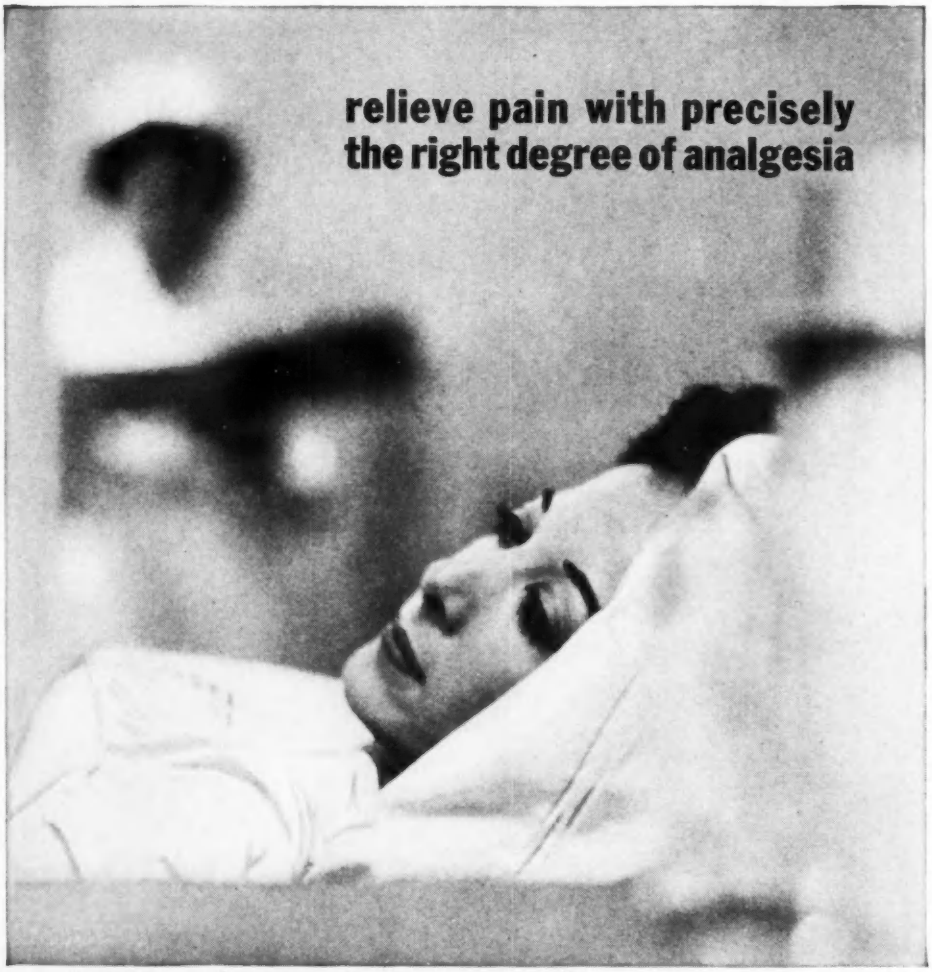

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VOL. 2, NO. 14

MEDICAL WORLD NEWS

THE NEWSMAGAZINE OF MEDICINE

JULY 7, 1961

CONTENTS

On the cover: Fluorescence photographs reveal changes in the nucleic acids of trachoma virus as it attacks and ultimately destroys a host cell. Story on p. 26.

Departments

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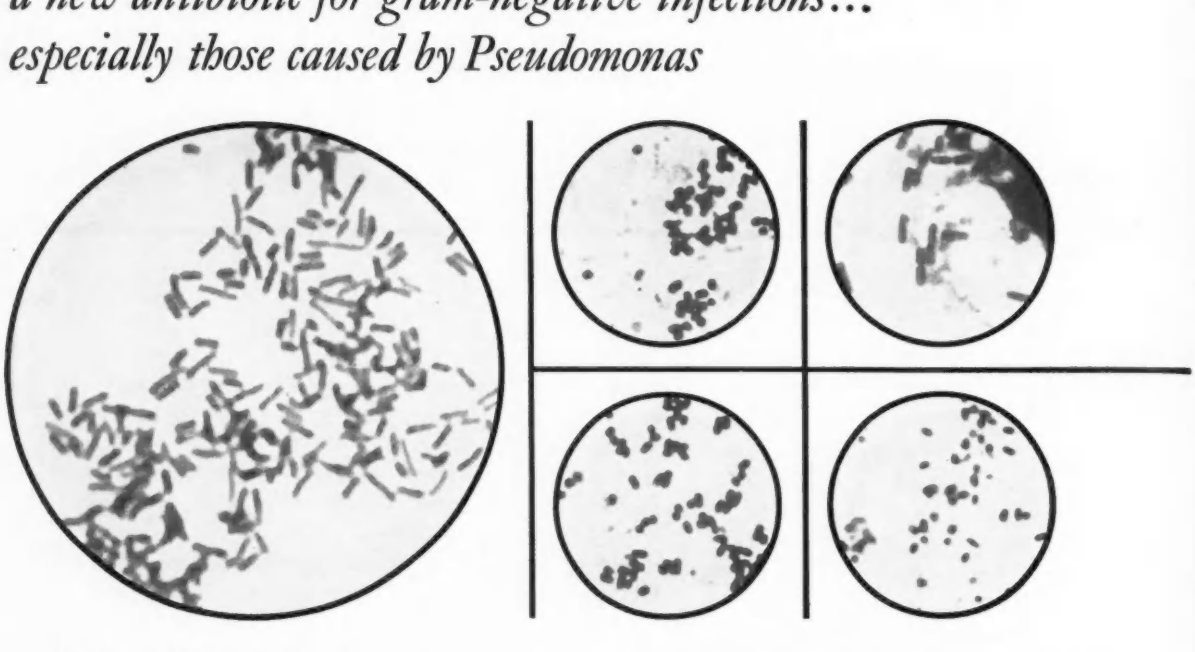
ANNOUNCING

a new antibiotic for gram-negative infections...
especially those caused by Pseudomonas



COLY·MYCIN® INJECTABLE

THE ONLY BRAND OF COLISTIMETHATE SODIUM

COLY-MYCIN IS PARTICULARLY VALUABLE IN ACUTE OR RESISTANT GRAM-NEGATIVE URINARY INFECTIONS. It is "the drug of choice"[5,15] in many urinary infections due to Pseudomonas. Coly-Mycin has also been of value in respiratory, blood stream, surgical, wound and burn infections when due to sensitive organisms. It is often successful when other antibacterials fail.[1-5]

FOR EXAMPLE: In one study, Coly-Mycin cleared the urinary tract of Pseudomonas infection in 58 of 60 patients. In another study, "Fifteen of the 18 patients infected with *Escherichia coli* who were treated with colistin [Coly-Mycin] had sterile urine cultures upon conclusion of treatment."[13]

PRIMARILY BACTERICIDAL[1,6,8,10] Unusually effective against a wide range of gram-negative pathogenic bacteria, especially *Pseudomonas aeruginosa*, *Escherichia coli*, *Aerobacter aerogenes* and *Klebsiella pneumoniae*.[1-15] (Not effective against Proteus.)

RAPIDLY EFFECTIVE Therapeutic blood levels[1,6,8,10,11] and urine concentrations are quickly attained.[5,8]

EXCEPTIONALLY WELL TOLERATED in patients of all ages at recommended dosage. No blood dyscrasia, renal damage, eighth nerve disturbance or other serious reaction has been reported, but minor side effects—such as circumoral paresthesias, pruritus, vertigo, and drug fever—have occurred.

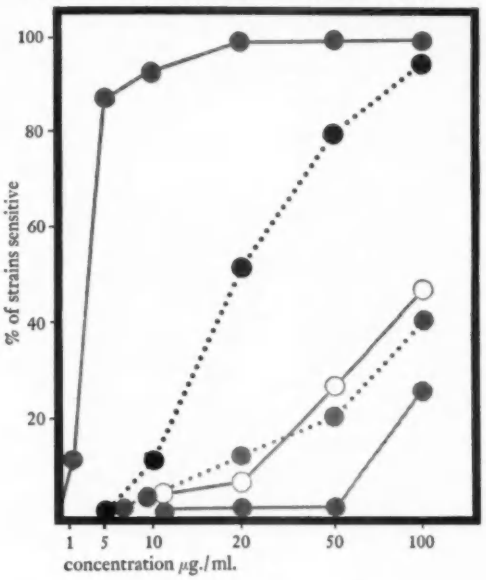
- To date there have been no reports of monilial overgrowth due to Coly-Mycin therapy.
- Resistant strains develop infrequently.[1,6,10]
- No cross resistance to broad-spectrum antibiotics has been reported,[6] however, cross resistance to polymyxin does occur.

Full dosage information, available on request, should be consulted before initiating therapy.

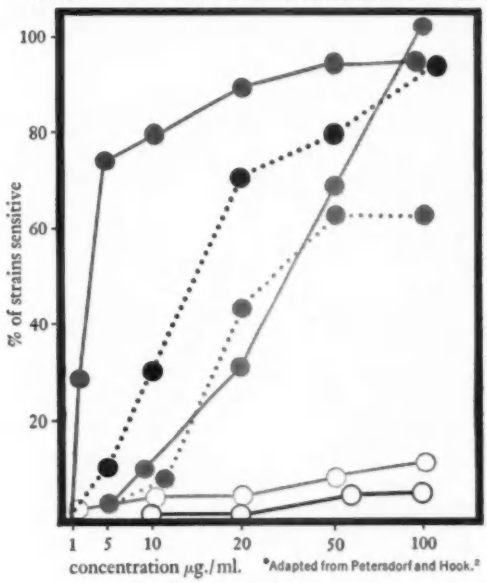
Supplied: in vials containing 150 mg. colistimethate sodium and 8 mg. dibucaine hydrochloride for reconstitution with 2 ml. sterile distilled water for injection. *For intramuscular injection only.*

References: 1. Carroll, G., and Malette, W. F.: J. Urol. *85*:86, 1961. 2. Petersdorf, R. G., and Hook, E. W.: Bull. Johns Hopkins Hosp. *107*:133, 1960. 3. Hall, J. W.: Am. J. M. Sc. *240*:561, 1960. 4. Zinsser, H. H.; Lattimer, J. K., and Seneca, H.: J. Urol. *83*:755, 1960. 5. Roberts, C. E., Jr., and Kirby, W. M. M.: Colistin in the treatment of hospitalized patients with Pseudomonas infections, presented at the 1960 Conference on Anti-Microbial Agents, Washington, D. C. 6. Schwartz, B. S., *et al.*: Antibiotics Annual 1959-1960, New York, Antibiotica, Inc., 1960, pp. 41-60. 7. Graber, C. D.; Tumbusch, W. T., and Vogel, E. H., Jr.: *Ibid.*, pp. 77-79. 8. Wright, W. W., and Welch, H.: *Ibid.*, pp. 61-74. 9. Ross, S.; Puig, J. R., and Zaremba, E. A.: *Ibid.*, pp. 89-100. 10. McCabe, W. R.; Jackson, G. G., and Kozij, V. M.: *Ibid.*, pp. 80-88. 11. Blaustein, A.: *Ibid.*, pp. 75-76. 12. Meleney, F. L., and Prout, G. R.: Surg. Gynec. & Obst. *112*:211, 1961. 13. McCabe, W. R., and Jackson, G. G.: Am. J. M. Sc. *240*:754, 1960. 14. Carroll, G.: J. Oklahoma M. A. *53*:678, 1960. 15. Seneca, H.; Lattimer, J. K., and Zinsser, H.: New York J. Med. *60*:3630, 1960.

BACTERICIDAL ACTIVITY OF COLY-MYCIN AND 4 OTHER ANTIBIOTICS AGAINST PSEUDOMONAS*



BACTERICIDAL ACTIVITY OF COLY-MYCIN AND 5 OTHER ANTIBIOTICS AGAINST ESCHERICHIA COLI*



*Adapted from Petersdorf and Hook.[2]

WARNER CHILCOTT
MORRIS PLAINS, N.J.

makers of Gelusil Tedral Mandelamine Peritrate Proloid

LATEN

SURVEY FINDS HEALTH INSURANCE A HIT IN FRANCE

Most of those fifty million Frenchmen (who, the adage says, can't be wrong) support compulsory health service, according to a survey just conducted by the government.

Last year, the De Gaulle government adopted legislation setting fixed fees for physicians with 80 per cent reimbursement from social security funds. Recently, the *Institut de Sciences Sociales du Travail* surveyed a 4,000-family sample, covering France's larger cities, on their attitudes toward the law. Among the findings in the two-volume report:

- Nine out of ten insured persons felt that their medical benefits were worth more than a ten per cent wage increase. And more than three-quarters would not trade the insurance plan for even a 20 per cent salary hike.
- More than 84 per cent find it "normal" that healthy persons share the expenses of the sick; only 12 per cent feel that insured persons should get no more than they contributed.
- More than half of those questioned feel that doctors' fees should be reimbursed 100 per cent, instead of the present 80 per cent.
- More than three-quarters feel that social security in general is "good" or "very good," while only two per cent wholly disapprove of it.

CARCINOGEN SCREENING JOB CUT DOWN TO BACTERIAL SIZE

Two investigators at the University of California, Richmond, have found a microscopic laboratory "animal" which can screen possible carcinogens in millionth-of-a-gram quantities.

Drs. William D. Won and Jerome F. Thomas point out that of the more than 100 potential carcinogens isolated from polluted urban air, less than 20 per cent have been definitely convicted or acquitted of causing cancer. Most have been purified in only infinitesimal quantities—and ordinary carcinogenic tests on mice or rats require at least 20/1000 gm per animal.

The investigators have found, however, that Bacillus megatherium, grown in the presence of carcinogenic hydrocarbons, undergoes structural and biochemical changes characteristic of malignant cells in higher animals. Twenty-four to 48 hours after

inoculation, giant mottled and reticulated cells appear; biochemical assays show increases in cellular fat, enzyme activity and lactic acid production. Bacteria grown with noncarcinogens do not show any such changes, they report.

The technique can be used, they suggest, to screen all unidentified organic air pollutants. Suspicious compounds would then be collected in larger amounts for animal testing and eventual chemical identification.

CASE REPORTED OF RARE 'RUBBER SKIN' ANOMALY

The Ehlers-Danlos syndrome is so rare that its rubber-skinned victims have frequently won fame as sideshow oddities. Though it was described as early as 1682, only 100 cases are on record. Since 99 of these involved Europeans (the 100th was a Hindu), the hereditary anomaly has been thought to be confined to the Caucasian race.

But two New York City physicians have found it in four members of two generations of a Negro family; a fifth member of a third generation probably was also afflicted.

Drs. Michael S. Bruno and P. Narashimhan of Knickerbocker Hospital report in the *New England Journal of Medicine* that they first suspected the syndrome when they examined a 28-year old woman with a non-healing ulcer of the chin. Her skin, they report, could be "easily lifted all over the body, including the forehead." It was extremely velvety in appearance, "resembling damp chamois on palpation."

The patient had a long history of excessive bleeding following minor injuries and reported prolonged healing from even slight wounds. Every joint and ligament in her body was hyperelastic. Diagnosis was proved by a skin biopsy revealing an abnormal "wicker-work" pattern.

Three of the patient's children show the typical hyperelasticity of the skin and hyperextensibility of the joints. Two have histories of bleeding tendencies since birth. The patient's father had the same type of skin, was known as a "bleeder" and a "slow healer." He died at the age of 50, apparently from hemorrhage following accidental injuries.

FIVE-YEAR STUDY YIELDS PLASTIC CORNEAL PROSTHESES

Since the beginning of this year, 13 New York City patients have undergone corneal transplants that were routine in every way—except that the "donor" corneas were made of Plexiglas plastic.

The surgery has been performed under the direction of Dr. Ramon Castroviejo, a pioneer in corneal transplantation. But credit for development of the Plexiglas implant goes to his young colleague, Dr. Hernando Cardona.

A native of Bogota, Colombia, Dr. Cardona began working on plastic corneas in 1956. After testing the physiological properties of various plastics, Dr. Cardona implanted trial corneas into the eyes of rabbits—animals noted for excessive thinness of the cornea.

"I thought that if the plastic would hold in an eye with such a thin cornea, it should also be suitable for human use," Dr. Cardona explains.

After the implants had proven successful in more than 100 animals, the Colombian ophthalmologist began trials with human beings. By 1960, 14 patients had received the keratoprostheses. Some of these, Dr. Cardona

CONTINUED ON PAGE 8

SPACE MDs REPORT ON U.S. ASTRONAUT'S FLIGHT

Cmdr. Alan B. Shepard's historic 15-minute flight into the lower reaches of space was a medical snap, say National Aeronautics and Space Agency physicians.

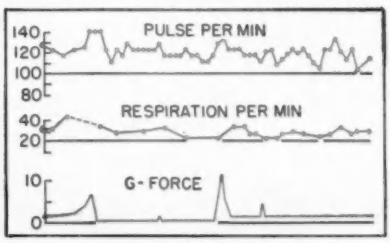
The astronaut's pulse rose sharply during the heavy "G-forces" of launch and re-entry, the medical team reports. Respiration stepped up, body temperature rose slightly, plasma norepinephrine nearly tripled, and there was minimal sinus arrythmia. But through it all, the slim Navy officer remained completely alert, relatively comfortable and fully capable of performing a variety of complicated in-flight maneuvers.

Reporting on telemetry data recorded during flight, Dr. William S. Augerson and his colleagues say that Shepard's pulse reached a peak of 138 during launching, when G-forces hit 6.2 (the astronaut's weight was 6.2 times normal). On re-entry, when G-forces reached their maximum of 11, his pulse rose only to 132. Respiration, with a pre-flight level of 15-20 per minute, climbed to 40 during launching and 30 during re-entry. Except for a minimal sinus arryhthmia during countdown (which Shepard had displayed in training), the EKG's revealed "no significant abnormality."

Both the astronaut and his doctors agree that his five minutes of weightlessness caused no significant response.

Dr. Carmault B. Jackson and his associates, who examined Shepard before and after the historic flight, report that his weight dropped by three pounds during the space voyage, while his rectal temperature rose from 99 to 100.2 degrees. EKG, EEG and chest x-rays were all "normal."

"WIRED" for take-off (above), Cmdr. Shepard transmitted data (below) during blast-off, turn-about, re-entry.



recently learned, have retained the implants for as much as five years.

In New York, where Dr. Cardona has been pursuing his research at Columbia-Presbyterian Hospital since early last year, the 13 volunteer patients in the present clinical trial have cooperated with full knowledge that the implant may eventually be extruded, the two ophthalmologists state.

"We still cannot be sure just how long the implants will be retained," Dr. Cardona cautions. But should the procedure live up to expectations, it may obviate the need for viable human grafts, which are in chronic short supply.

Each prosthesis, notes Dr. Cardona, is hand made and tailored to the size of the individual eye. The plastic is flame-polished, eliminating the microscopic scratches left by grinding, which might irritate the eye and thereby accelerate rejection of the implant.

LOW-SALT DIETERS IN FAR WEST URGED TO DRINK ORANGE JUICE

Apart from the obvious temptation to nibble a few peanuts while sipping beer, the low-salt dieter is confronted with the ubiquitous sodium ion lurking in various unsuspected places.

Recent studies in California, Nevada, Arizona and other arid areas, for instance, have shown that presumably "sweet" fresh drinking water may contain from two to four grams of sodium per liter—way above the permitted daily level for the salt-watcher, says Dr. George C. Griffith, chief of cardiology at the University of Southern California. To get around the problem, patients in these areas have to drink distilled water.

But in drinking distilled water, the patient exposes himself to another danger, warns Dr. Griffith. Distilled water is potassium-free, which raises the possibility of hypokalemia. Too solve this problem, Dr. Griffith suggests drinking orange juice. Each 2.5 oz can of concentrated orange juice, he says, contains 4.5 grams of potassium, prevents hypokalemia and also supplies extra vitamins. (At the same time, notes the California cardiologist, the patient gives a boost to one of the West's favored industries.)

PYRIDOXINE LOWERS THE INCIDENCE OF TOOTH DECAY

Vitamin B_6, for some unknown reason, helps prevent tooth decay. Results of a controlled study of pregnant women—a group especially prone to enamel problems—show that pyridoxine supplements significantly reduce the number of decayed teeth.

The study covered 468 women no more than four months pregnant who were randomly divided into three groups by Dr. Robert W. Hillman and co-workers of the State University of New York College of Medicine, Brooklyn. One group, the controls, received daily three placebo lozenges and a vitamin-mineral capsule, all without B_6. In the second group, only the capsule contained the vitamin, and in the third, only the lozenges.

Comparisons made approximately six weeks after delivery, showed that women on pyridoxine lozenges had 36 per cent fewer new caries and those on the supplemented capsules had a 17 per cent reduction.

Perhaps this explains why an earlier study of Cuban children, who chew sugar cane regularly, showed a surprisingly low incidence of dental caries. Theoretically, excess sugar should promote decay, especially among a group with poor dental hygiene. But sugar cane is rich in vitamin B_6.

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A LETTER FROM THE PUBLISHER

More than a decade ago, in company with August Heckscher, then an editorial writer on the New York *Herald-Tribune,* Russell Lynes of *Harper's* magazine, Mrs. Alice Fordyce and Drs. Alan Gregg and Cornelius Traeger, I became a member of a modest committee to help select the best medical articles of the year.

A few weeks ago, I was one of 300 guests in the ballroom of the Sheraton East Hotel in New York to witness the presentation of the famed Albert and Mary Lasker Foundation awards in medical journalism. Dr. Howard Rusk presided, and the toastmaster was Mayor Robert Wagner. Sen. Maurine Neuberger of Oregon presented the awards; the principal speaker was Vice-President Lyndon Johnson.

MARY LASKER

Television cameras and newspaper reporters were in evidence everywhere. Many of the most distinguished and active men and women in American medicine, public health and the press were present, including Dr. Frank Horsfall, Basil O'Connor, Mrs. Anna Rosenberg, Mrs. De Witt Wallace, Roy Howard, Surgeon General Luther Terry, Clifton Daniel, and Drs. George Papanicolaou, Vincent du Vigneaud, Irving Wright and Sidney Farber.

At times, I hardly heard what the speakers were saying because my mind kept returning to the days when our selection committee met in a little balcony room of the same hotel, never dreaming that the awards luncheon would ever be such a command performance.

While I was delving into the past, the Vice-President was thinking of the future. He was so impressed with the luncheon and its purpose that he invited the award winners to join him on his Far Eastern trip of state. Mrs. Lasker offered to contribute $1,000 toward the expenses of those who accepted the Vice-President's invitation. So as a surprise bonus, two of this year's winners, Don Seaver of the Charlotte (N.C.) *Observer* and Stan Atkinson of KCRA-TV, Sacramento, Calif., have just toured the Far East with the Vice-President on his historic trip.

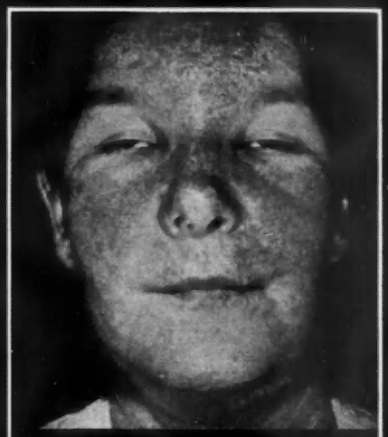
The contrast between this year's affair and the days I so vividly recall is more than just striking—it is indicative of what has happened to medicine and medical writing in one short decade. A great part of the outstanding achievements of our scientists can be attributed to a dramatic increase in public attention, and to the accompanying enormous funds and brilliant talents channeled into medical research by Government, industry, universities and philanthropies.

Much of this public attention, in turn, is attributable to the award-winning medical writers and to the stimulus they receive from Mary Lasker, the modest, charming and dedicated lady who has contributed so much to American medical progress.

M M Geffen

Publisher

Allergic or inflammatory flare-up!



Female, 41; Dx: dermatitis venenata. Contactant: calamine-antihistamine lotion applied for contact dermatitis—Rx Celestone Tablets, 0.6 mg. Photograph prior to Rx.

Step-down dosage of 1 tab. q.i.d. for 2 days, 1 tab. t.i.d. for 2 days, 1 tab. b.i.d. for 2 days and 1 tab. daily for 8 days. Results: condition completely cleared. Side Effects: none. Photograph after 72 hours of Celestone therapy. (Photographs courtesy of M. M. Nierman, M.D., Calumet City, Ill.)

Schering

Rapid remission with new Celestone

the first major advance in corticosteroid therapy in over 2½ years

Clinical worth: CELESTONE provides greatly enhanced antiallergic and anti-inflammatory effects with significantly lower mg. dosages. Its efficacy and safety have been established by 20 months of pre-introductory clinical trials in such steroid-responsive disorders as:

- bronchial asthma
- pollenosis (severe hay fever)
- allergic/inflammatory dermatoses
- inflammatory eye diseases
- rheumatoid arthritis

Exceptional utility: From simple dermatoses to the more severe steroid-responsive conditions, the unexcelled anti-inflammatory effect of CELESTONE provides rapid clinical improvement with average daily dosages of from 2 to 8 tablets.

Ease of use: CELESTONE has simple-to-follow dosage schedules for all steroid-responsive disorders based on a single tablet strength, 0.6 mg. Patients may be switched easily from other corticosteroids to CELESTONE with proper dosage adjustments.

Safety-speed factor: CELESTONE is particularly valuable for short-term therapy of acute inflammatory episodes because inflammation is resolved quickly, thus helping to avoid certain corticoid side effects such as:

- weight loss
- anorexia
- vertigo
- severe headache
- sodium and water retention
- muscle weakness
- potassium excretion

Improved response: CELESTONE also offers the advantage of providing an opportunity to restore "lost" or diminished control in patients receiving other steroids.

For complete details, consult latest Schering literature available from your Schering Representative or the Medical Services Department, Schering Corporation, Bloomfield, New Jersey.

Bibliography: 1. Goldman, L.: Investigation of a New Steroid in Dermatology. Paper presented at First Symposium on the Clinical Application of Betamethasone: A New Corticosteroid, New York City, May 8, 1961. 2. Nierman, M. M.: The Use of Betamethasone in Dermatology. *Ibid.* 3. Gant, J. Q., and Gould, A. H.: Betamethasone: A Clinical Study. *Ibid.* 4. Frank, L.: The Place of Betamethasone in Dermatologic Practice. *Ibid.* 5. Hampton, S. F.: Betamethasone—A New Steroid in Allergy: A Preliminary Report. *Ibid.* 6. Bukantz, S. C.: Observations on the Use of Betamethasone in the Intractable Asthmatic Child. *Ibid.* 7. Bedell, H.: A New Systemic Steroid in the Treatment of Allergies in Office Practice. *Ibid.* 8. Schwartz, E.: Clinical Evaluation of Betamethasone in Chronic Intractable Bronchial Asthma. *Ibid.* 9. Kammerer, W. H.: Observations on the Effects of Betamethasone in Rheumatoid Arthritis. *Ibid.* 10. Cohen, A., and Goldman, J.: Management of Rheumatoid Arthritis with a New Steroid. *Ibid.* 11. Gordon, D. M.: Betamethasone—A New Corticosteroid in Ophthalmology. *Ibid.* 12. Abrahamson, I. A., Jr.: A Clinical Evaluation of Betamethasone. *Ibid.*

H-371

(betamethasone) **Tablets, 0.6 mg.**

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a new magnitude in corticosteroid activity

you can count on

TAO®

triacetyloleandomycin

IN SUMMER INFECTIONS

OF SKIN AND SOFT TISSUE (SUCH AS IMPETIGO, INFECTED WOUNDS) DUE TO SUSCEPTIBLE ORGANISMS

against the pathogen—Tao extends the Gram-positive spectrum of usefulness to include many staphylococci resistant to one or more of the commonly used antibiotics.

for the patient—Tao narrows the spectrum of side effects by avoiding many allergic reactions and changes in intestinal bacterial balance.

Tao performance in clinical practice: "The results [in 81 cases] . . . show that triacetyloleandomycin is an effective antibiotic and that it is especially so against pathogenic staphylococci. . . ."[1]

"Results with triacetyloleandomycin in this study [74 patients], therefore, corroborate those of other dermatologic investigators and show this antibiotic to possess a good therapeutic index and low order of toxicity and allergic sensitivity."[2]

Good to excellent results (with symptomatic treatment) in all of 30 skin and/or soft tissue infections which had failed to improve or resolve with local treatment, incision and drainage, or debridement.[3]

Precautions and side effects: The use of antibiotics may occasionally permit overgrowth of nonsusceptible organisms. A resistant infection or superinfection requires re-evaluation of the patient's therapy. This preparation should be discontinued, and specific therapy and indicated supportive treatment instituted if such resistant infection or superinfection should appear.

Following widespread and extensive use of TAO, mild reversible jaundice presumed to have been caused by the administration of TAO has been observed in a few pediatric patients. In these cases jaundice was first noticed after periods varying from 10 days to 8 weeks of continuous treatment with the drug. When jaundice was first noticed, the doses employed in these children ranged from 50 to 100 mg./kg./day, a dose which in all cases is in excess of those recommended. In every case the jaundice was mild and quickly reversible on discontinuance of medication.

Available as *Tao Capsules*, 250 and 125 mg.; *Ready Mixed Oral Suspension*, 125 mg. per 5 cc.; *Pediatric Drops*, 100 mg. per cc. of reconstituted liquid; *Intramuscular* or *Intravenous*, as oleandomycin phosphate.

References: 1. LeFebvre, M., et al.: Antibiotics Annual 1959-1960, New York, Antibiotica, Inc., 1960, p. 755. 2. Fisher, A. A.: Med. Times **88**:1056 (Sept.) 1960. 3. Steller, R. E.: Antibiotic Med. & Clin. Therapy **7**:691 (Nov.) 1960.

Literature on request.

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OUTLOOK

- AMA announces preparation of yearly drug report
- Measles immunization conference planned for Fall

Chances are remote that the current Kefauver hearings on drug control legislation will result in any specific proposals to Congress this year. With AMA testimony postponed until this week, prospects now are that the hearings will run an intermittent course, probably concluding after the members of Congress have gone home.

A new bill "to provide education in the U.S." has been presented to Congress, sponsored by Republican Senators Goldwater of Arizona and Dirksen of Illinois. Its chief feature: a provision to let taxpayers deduct from their Federal income tax the full amount they pay in local school taxes.

Over-the-counter sedatives are going to get the Federal Trade Commission once-over, particularly if their makers claim such products embody new medical discoveries or that they are harmless. Complaints already have been lodged against two brands, "Tranquil-Aid" and "Sedaquil." The Government wants their claims toned down to avoid "misrepresentation."

A new drug information program is being launched by the AMA (MWN, Jan. 20). One aspect of the program: publication of an annual volume that will include authoritative statements on drugs and their usage. But the first of these volumes probably won't appear for another 18 months.

Following the lead of New York City Health Department physicians, doctors employed by other cities may be getting ready to set up unions of their own. That's the impression given by the lawyer representing the New York MDs. He says he has received requests for information and help from health department doctors in Washington, California, Louisiana, Missouri and Illinois.

Cutter polio vaccine damage suit settlements—in and out of court—have totaled well over $1 million since 1955. Product liability insurance has covered all the settlements made so far. With some 20 suits still pending, however, company president Dr. Robert K. Cutter says, "It is not probable that insurance will cover all of the settlements."

A $40 million expansion program will triple the size of Philadelphia's Jefferson Medical College. However, with some of the land still to be acquired and some of the buildings still on the drawing boards, the project won't be completed until 1975, the 150th anniversary of Jefferson's founding.

Interest is high in the coming international conference on measles immunization scheduled for Nov. 7-9 at the National Institutes of Health, Bethesda, Md. Investigators from universities and pharmaceutical companies have been invited to attend, along with representatives from other nations. A number of the big pharmaceutical houses are already well on the way to marketing a measles vaccine.

A prepaid prescription insurance plan is to be announced this fall by New York City's Blue Cross and Blue Shield. Mr. Frank Van Dyke, vice-president of both plans, explains that out-of-hospital coverage for Rx products is just one part of a broad program of Blue Cross-Blue Shield reorganization. When the new setup goes into effect, group subscribers will get prescription coverage via new contracts with a unified Blue Cross-Blue Shield.

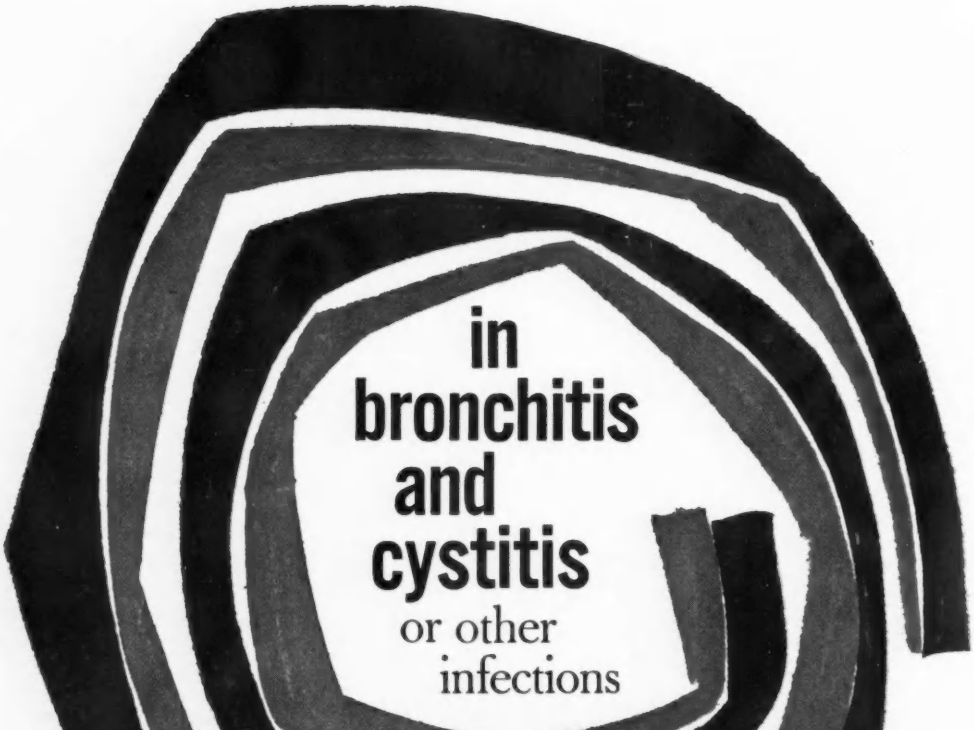
The FDA has turned down an application to license Krebiozen as a hormone, calling it a biological, instead. But the National Cancer Institute still has to rule on Krebiozen as an anti-cancer drug.

MEETINGS

July 12-13	Rocky Mountain Cancer Conference, Denver
July 14-15	The Thoracic Society, Harrogate, Wales
July 16-21	4th Int'l Conference on Medical Electronics, New York City
July 17-22	British Medical Association, Sheffield, England
July 22-29	Latin Federation of Medical Electro-Radiological Societies, Paris
July 23-28	Int'l Congress of Otolaryngology, Paris
July 24-30	Int'l Congress of Urology, Rio de Janeiro
July 30-Aug. 2	Int'l Bronchoesophagological Society, Reims, France
July 30-Aug. 3	Int'l Psychoanalytic Congress, Edinburgh
Aug. 7-10	National Medical Association, New York City
Aug. 10-12	Rocky Mountain Radiological Society, Denver

UPCOMING

Sept. 4-7	10th Int'l Symposium on Chemotherapy, Naples
Oct. 23-24	American Cancer Society, Scientific Session, New York City
Oct. 31-Nov. 2	American Society for Microbiology, New York City
Nov. 13-17	American Public Health Association, Detroit



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MEDICAL WORLD NEWS
July 7, 1961 Vol. 2, No. 14

ONE-SHOT PROPHYLAXIS TESTED FOR Rh MOTHERS

English researchers score preliminary success in blocking the formation of Rh antibodies with an injection of anti-Rh serum

Prevention of Rh sensitization and Rh hemolytic disease may be achieved with a new technique, just reported by a group of physicians and serologists in Liverpool, of "imitating" a natural immune process.

If the English team's method, which is still in the experimental stage, proves effective, it could save thousands of newborns from morbidity or death due to erythroblastosis fetalis.

The rationale for the method stems from a number of observations made since the Rh factor was identified in 1940. It has been estimated, for instance, that some 14 per cent of marriages in the U. S. and England take place between Rh-negative women and Rh-positive men. Thus 14 per cent of all married women are, in principle, vulnerable to iso-immunization from the Rh factor in the blood of Rh-positive husbands, and their newborns can be affected with one of the various forms of erythroblastosis.

Yet only 0.5 per cent of all deliveries result in the birth of an infant affected by the disease — an incidence more than 20 times lower than could be expected statistically. Obviously, elements other than Rh antibody formation must come into play. The chief factor is the ability of the placenta to prevent the passage of fetal blood cells into the maternal circulation — the event that triggers iso-immunization. This placental barrier, however, is frequently broken during pregnancy and particularly during delivery, so that a woman is more likely to have an Rh hemolytic child after her first pregnancy, when antibodies have built up in her serum.

Another barrier to Rh immunization stems, strangely enough, from the incompatibility between the fetal cells and the mother's plasma of the long-known ABO blood types. If, for instance, the fetal blood is of type A, and the mother's type B, red cells intruding from the fetal into the maternal circulation are rapidly coated with anti-A antibody, and destroyed before they can stimulate the formation of Rh antibody by the mother.

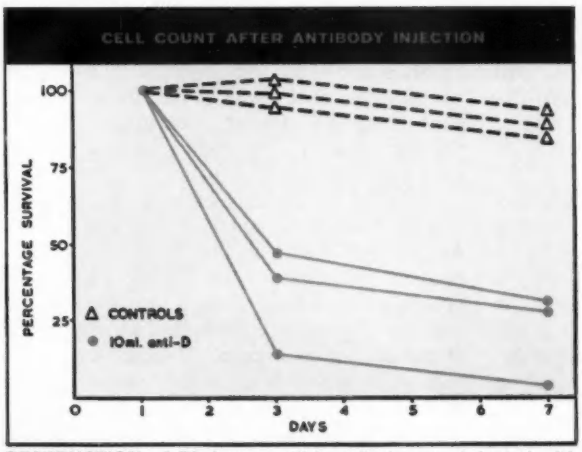
This mechanism, which seldom causes serious illness, is the key to the new approach. In hopes of imitating it for prophylaxis, the Liverpool researchers have completed an investigation not unworthy of Scotland Yard. They conclude that it *is* possible to eliminate Rh-positive, but ABO compatible, cells from the blood of an Rh-negative mother by introducing into her circulation antibodies against the Rh antigen itself.

To test this hypothesis without the danger of affecting possible future pregnancies, the team headed by Dr. R. Finn of the University of Liverpool injected six Rh-negative men of blood group A with radioactively tagged blood from Rh-positive donors, also of blood type A. (The volume injected was 5 cc, an amount known to be large enough to cause Rh sensitization, and of the same order as an average leakage from placenta to mother.) Half an hour later, they followed up with an injection of 10 cc of anti-Rh (also known as anti-D) serum to half of the six subjects. Finally, samples of blood from all the six were withdrawn—two, four and 14 days later. The telltale analysis showed:

- In the three injected with anti-Rh, a "good proportion" of the Rh-positive cells became coated with the antigen. It had been observed previously that when they are antigen-coated, cells are likely to be removed from the circulation by the spleen.
- Administration of the antibody appeared to cut at least by half the number of circulating Rh-positive cells during the first two days. Then, the comparatively rapid decline became less pronounced.

On the basis of these results, the researchers believe that a simple injection of

CONTINUED ON PAGE 16



DESTRUCTION of Rh incompatible cells in men injected with anti-Rh serum is rapid, while most cells in controls survive.

Rh PROPHYLAXIS CONTINUED

anti-Rh serum after the first delivery could, theoretically, prevent iso-immunization in many women by acting similarly on invading fetal blood cells. But despite the "hopeful" progress toward this possibility, Dr. Finn remains cautious. "This is still no more than a hypothesis," the Liverpool investigator told MEDICAL WORLD NEWS in a telephone interview.

Many problems remain to be solved. For instance, a more rapid elimination of all fetal cells is probably necessary. The partial destruction observed in the experiment may indicate that not enough anti-Rh was administered, and that a second dose should be given. The British investigators also noted they used an antiserum containing both "complete" and "incomplete" antibodies—the two being distinguished by the size of their molecules and their chemical mode of action. Different types of antisera might be needed, each requiring appropriate dosage.

Many Problems Still Unsolved

Moreover, the proportion of fetal bleeds occurring before labor is still unknown, they point out. If much leakage occurs before delivery, injection of anti-Rh sera afterwards would be poor protection against sensitization. If antibody were to be injected before delivery, however, it might penetrate the placenta and precipitate a fetal hemolytic reaction that might otherwise not occur.

Despite these unsolved problems, the team finds the signs are very hopeful, though the final proof of the feasibility of such protection will have to await results of sensitization tests in the six volunteers. These tests will consist of giving them a small provocative dose of Rh-positive cells several months after the initial injection of anti-Rh serum.

Should these tests eventually lead to an efficient method of preventing Rh sensitization, there ought to be no difficulty in detecting women who need it, since the technique of screening the presence of circulating fetal cells could be applied in any hospital laboratory, they say. If it can be shown that some type of anti-Rh is fully effective, the number of women requiring prophylaxis (about two per cent of all pregnancies, according to the researchers) is not likely to be too large for available supplies of antiserum. In time, they believe, "Rh hemolytic disease could be eliminated."

Commenting on the work by the British team, Dr. Alexander Wiener of New York, co-discoverer of the Rh factor, told MEDICAL WORLD NEWS he found the method one of the most interesting attempts to achieve prophylaxis of erythroblastosis fetalis.

Crucial Test Still to Come

Yet, he warns, it is not likely to become a panacea. In half of the cases of hemolytic disease, fetal blood leakage does occur *before* delivery. Since anti-Rh could not be injected into the mother until *after* delivery, it will be of help in only half of the cases. He also thinks that the method of detecting leakage may not be sufficiently efficient. Further, the injection of anti-Rh antibody so far has not destroyed all the invading cells, but only half of them, which again might cut the method's efficiency by half. The crucial point, Dr. Wiener believes, will be the testing of the six volunteers—and a larger number of subjects—with a provocative dose of Rh-positive cells. Until it is known whether or not they show a hemolytic reaction, no conclusion can be reached.

Yet, the investigation holds more promise than other prophylactic methods, he says, including one he devised himself, which worked but was dropped for its impracticability.

Twelve More Volunteers Injected

The team carrying out the current project consists of Drs. R. Finn, C. A. Clarke, W. T. A. Donohoe and R. B. McConnell of the University of Liverpool department of medicine; Dr. P. M. Sheppard of the sub-department of genetics; Dr. D. Lehane of the Liverpool Regional Blood Transfusion Service; and Dr. W. Kulke of the Liverpool Radium Institute.

Tersely, but optimistically, a last-minute addendum to their findings was made in the journal of the British Medical Association: "A further 12 volunteers have been studied, and the radioactivity results confirm that about 60 per cent of the injected Rh-positive cells are removed from the circulation by the administration of anti-D (anti-Rh). It is now apparent that the major part of the fall occurs within a few hours." ■

DR. FOGEL strikes ankle to test thyroid.

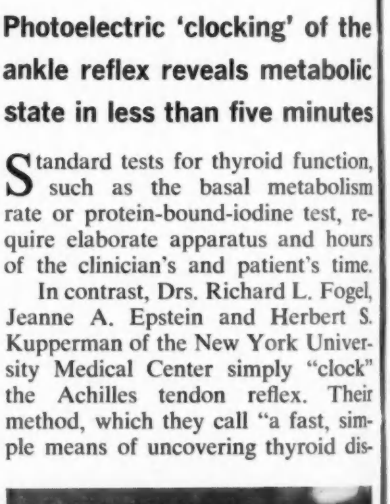
PHOTO

TENDON TA

Photoelectric 'clocking' of the ankle reflex reveals metabolic state in less than five minutes

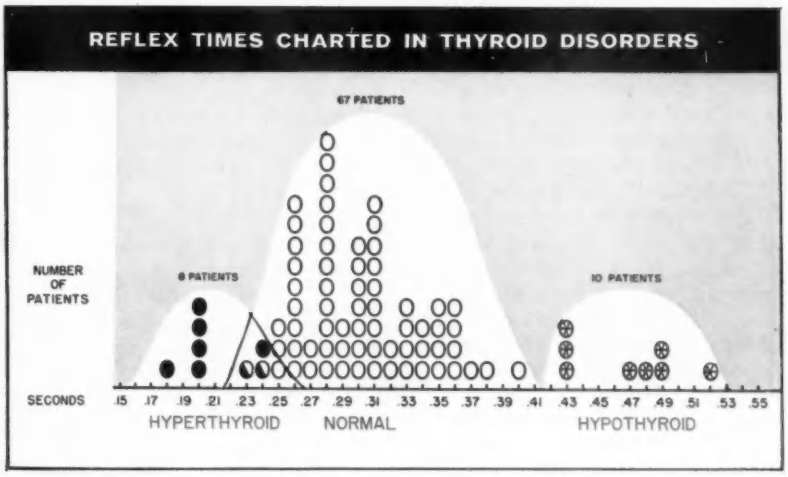
Standard tests for thyroid function, such as the basal metabolism rate or protein-bound-iodine test, require elaborate apparatus and hours of the clinician's and patient's time.

In contrast, Drs. Richard L. Fogel, Jeanne A. Epstein and Herbert S. Kupperman of the New York University Medical Center simply "clock" the Achilles tendon reflex. Their method, which they call "a fast, simple means of uncovering thyroid dis-



DR. KUPPERMAN cites test's accuracy.

PHOTOELECTRIC eye 'reads' foot jerk.



HYPOTHYROID reflex times are clearly distinguished; hyperthyroids slightly overlap.

MAKES 'TIMELY' THYROID TEST

ease," can be performed in about the time required to read this page. And the only patient not eligible for the test is the rare individual in whom it is impossible to induce a reflex.

A correlation between metabolic state and reflex speed has long been noted, explains Dr. Fogel. It is based on the association between muscle rigidity and hypothyroidism. But precise measurement of tendon reflexes has not been possible.

Now, with a photoelectric unit linked to an electrocardiograph, the New York group has developed a test which they find "remarkably accurate." In a study of 270 patients, the test picked out 21 hypothyroids and 24 hyperthyroids. The diagnostic accuracy of the Achilles tendon test has been confirmed by protein-bound-iodine (PBI), radioactive-iodine uptake (RAI) and cholesterol studies, they reported to the Endocrine Society in New York. Only two hyperthyroids showed reflexes slow enough to fall into the borderline area between euthyroid and hyperthyroid. One additional "possible" hypothyroid fell within the normal range.

To carry out the test, the patient kneels on a chair with his bare foot hanging over the edge. The physician adjusts the U-shaped photoelectric unit so that its beam just brushes the back of the heel. He then strikes the Achilles tendon. The resulting jerk of the foot cuts the beam. The change in light intensity is picked up by the electrocardiograph connected to the photoelectric unit, and a tracing of the movement is made directly on cardiograph paper. Any direct-writing cardiograph can be used in the test.

According to Dr. Fogel, the study has established that reflex time in euthyroids varies from 0.23 to 0.40 seconds, hypothyroids range between 0.44 and 0.64 seconds (with "possible" hypothyroids at 0.41 to 0.43), while hyperthyroids show a slight overlap, varying from 0.14 to 0.24 seconds (graph above). Measurement of the reflex movement takes two to five minutes, while diagnosis, based on the average of six tracings, can be done in three minutes or less, Dr. Fogel notes.

Retest Confirms Readings

The reliability of the test has been shown by retests of more than 50 patients, he says. Nearly all of the second and third readings checked exactly with the original time; only a few varied by as much as 0.04 seconds, and none of the euthyroids varied more than 0.02 seconds.

An important additional advantage of the new test, the New York team points out, is that with it the clinician can easily follow his patient's response to therapy—regardless of the type of therapy used. In contrast to the standard PBI and RAI tests for thyroid dysfunction, the tendon reflex is not affected by the ingestion of iodine compounds whether used in dietary supplements, diagnostic procedures or therapy, they find. Periodic reflex testing of patients after initiation of therapy has shown a "striking correlation" with the observed clinical response.

Nor is the ankle jerk test influenced by most of the physical conditions which often invalidate other diagnostic procedures. Cardiovascular, pulmonary and metabolic diseases have no effect on results. Obesity, hyperthermia, manic psychoses, disc syndromes and even most neurogenic disorders similarly leave the reflex time undisturbed.

Pregnancy, which almost invariably invalidates other thyroid diagnostic tests (the one exception is the PBI in the diagnosis of hypothyroidism), does not alter reflex response.

Moreover, they note, the test can be performed on patients of any age and in any mental state. Amphetamines, reserpine alkaloids and other tranquilizers administered to patients during the study failed to influence the recorded times in either direction.

Concludes the New York group: "If we could choose only one diagnostic procedure for screening thyroid patients, it would be this photomotogram technique." ■

STENOSIS (l.), relieved by surgery (c.), can recur (r.) if vesical neck is damaged.

SURGICAL EXPERTISE CAN CUT BOTH WAYS

In prostatectomy cases, too much operative diligence is as bad as too little, since renewed urethral stenosis may result

"Above all, no zeal!" quipped Talleyrand, the French statesman. His pithy warning against trying too hard is pertinent in medicine as well as politics, say two Mayo Clinic surgeons. Overzealous urologists, they declare, are a leading cause of recrudescent urethral stenosis following prostatic surgery.

"The more experienced the surgeon, and hence the more thorough the operation, the greater is the chance that scarring and contraction, along with diaphragm formation at the vesical neck, will develop as an apparently illogical sequela to the operation," say Drs. John C. Campbell and Laurence F. Greene.

Increasing Skill Brings Trouble

The two specialists first began to suspect the etiologic importance of operative overdiligence when they followed up a series of transurethral prostatectomies at the Clinic, they told the North American Federation of the International College of Surgeons. "Paradoxical as it may seem, the more proficient the operating group became at performing resection, the higher was the incidence of contracture.

"There appears to be a subconscious desire on the part of the surgeon to 'do a good job' and consequently the entire area is reamed out thoroughly. Frequently, the trigonal area is undermined and the lateral walls of the bladder are encroached upon."

Their hypothesis, that damage to the vesical neck is the key factor, was strengthened with the finding that postoperative contracture can also occur in female patients following "generous excision for chronic stenosing urethritis."

The Mayo team then sought to produce experimental stenosis in dogs by deliberately dissecting bladder and neck tissue. The operation yielded the expected result in 19 out of 22 animals, both male and female. By contrast, block resection of the entire vesical neck, with end-to-end anastomosis of the urethra and bladder and careful opposition of the mucous membrane, never led to stenosis.

"Excison of the fibromuscular tissue of the bladder neck is alone sufficient cause for the development of contracture at the neck, since it produces slow healing by granulation," according to the two Rochester, Minn., surgeons.

Their best advice: "Avoid cutting into the tissues of the neck. Every care must be taken to work distally, no matter how dangerous surgery in the area of the verumontanum is thought to be." Otherwise, the surgeon may face a difficult and complicated repair job later on. ■

MEDICARE CH

Federal accountants claim that private MDs are overcharging military dependents. But AMA, Army say fees are reasonable

The Government Accounting Office has charged that American taxpayers are paying out an extra $3 to $4 million a year because some physicians are charging "maximum" rather than their normal fees under the Defense Department's multi-million-dollar Medicare Program.

In states where fee schedules have been made public, the GAO says physicians have generally charged Medicare patients the maximum amount allowed. Their fees have been "significantly higher" than those of doctors who have had no schedules to guide them. As a result, the agency is recommending that the military try to negotiate "lower" schedules in those states where most physicians charge "maximum" fees.

If this can't be done, medical societies should be made to accept the responsibility for seeing to it that "physicians' claims are generally not in excess of their normal charges," the GAO says in a 70-page report to Congress. "We are also recommending that the physician be required to certify on each claim that the amount he is charging does not exceed his normal fee for the medical care furnished."

Army Supports Doctors

The Army, which administers the Medicare Program for the three armed services, is taking strong exception to the recommendations. It insists that the fees negotiated with physicians—whether published or not—are "reasonable." Although doctors are urged to submit "normal charges," it was expected that a "majority" would charge the maximum where the schedules were published, according to the Army.

The military cautions against any attempt to enforce charging of "normal" fees on the grounds that it would involve obtaining rights to examine doctors' records to determine "fees charged to non-Medicare patients."

The AMA, reacting sharply to the

CHARGE AND COUNTERCHARGE

GAO report, declares that it originally warned the Defense Department against establishing fixed fees because it would result "in a more expensive program than if physicians were permitted to charge their regular fees." During Medicare negotiations five years ago, the AMA emphasizes, "we repeatedly pointed out that knowledge of a fee schedule would tend to make physicians use the maximum fees, but Department of Defense officials would not listen."

The GAO is Congress' watchdog on Administration spending. It has virtually unlimited powers to investigate the use of Federal funds, and reports directly to the Speaker of the House. It is up to Congress to decide what action should be taken.

Investigators Compare Claims

In the period covered by the investigation, December 7, 1956 through June 20, 1959, physicians filed more than 1.2 million claims totaling about $94 million. GAO investigators checked claims paid in 29 states, involving most of the service dependents. In 19 states, complete fee schedules had been distributed. In two, schedules on only the more common procedures had been listed. In the other eight, schedules were not available to physicians.

A detailed study of maternity-care charges showed that in ten states where fee schedules were known, 93.5 per cent of all claims were at "maximum" fees. In five states, where the fee schedules were not listed, only 32.2 per cent of the charges were "maximum." The GAO says the fees in the ten states averaged $22 a claim more than in the other five even though it "doubted" that there was much difference in the fees the two groups of doctors normally charged their non-Medicare patients.

GAO notes, for example, that the fee physicians usually charge residents in Scranton, Pa., for obstetrical care, averaged $78.50 whereas the average charge is $175 in Los Angeles. The usual fee under Medicare, however, is $150 for both states.

During the 1959 fiscal year, physicians in states where fee schedules had been available were paid a total of $37 million. The GAO report points out that if the fees ran only a "conservative" ten per cent above what these physicians normally charged, the excess charges would total between $3 and $4 million.

A Monetary Advantage

"There does not appear to be any valid reason for giving a monetary advantage to physicians in the states where fees are made known over those in states which do not distribute fee schedules," the GAO says. "It would seem that, regardless of the methods used to negotiate fees, the cost to the Government should approximate the normal charge for individuals earning $4,500 a year, and it should not vary substantially in similar cost areas."

In taking issue with the GAO findings, the Army argues that the maximum fees it negotiated with state medical associations were "reasonable." In states where fees were not to be published, allowances were set to include both the rural physician and the urban specialist, "with a clear understanding with the state medical organization that effective control would be maintained on claims." The facts, the Army adds, show that the medical groups have "adhered to this principle." In states where the fees were to be published, the allowances were considered average charges for the whole state. The state societies were requested to urge physicians to charge only their normal fees, but it was expected a "majority" would charge the maximum.

The Army has promised, however, that "continuing emphasis will be maintained to enlist the assistance of medical societies in encouraging participating physicians to charge their usual fees," adding that it will continue to rely on the societies and the integrity of the individual physician. ■

VARIATIONS IN MATERNITY CARE FEES

STATES IN WHICH FEE SCHEDULES WERE DISTRIBUTED

STATE	MAXIMUM FEE ALLOWED*	NUMBER OF CLAIMS EXAMINED	NUMBER OF CLAIMS AT MAXIMUM	PER CENT OF CLAIMS AT MAXIMUM	AVERAGE COST OF EACH CLAIM
D. C.	$170	125	116	92.8%	$168.32
N. CAR.	160	100	77	77.0	157.75
PA.	150	93	93	100.0	150.00
CALIF.	150	196	192	98.0	149.85
FLA.	150	84	82	97.6	149.40
TEX.	150	130	127	97.7	149.23
GA.	150	74	69	93.3	148.78
ARK.	150	125	113	90.4	146.84
MASS.	150	90	76	84.4	146.73
S. CAR.	135	90	90	100.0	135.00

STATES IN WHICH FEE SCHEDULES WERE NOT DISTRIBUTED

STATE	MAXIMUM FEE ALLOWED*	NUMBER OF CLAIMS EXAMINED	NUMBER OF CLAIMS AT MAXIMUM	PER CENT OF CLAIMS AT MAXIMUM	AVERAGE COST OF EACH CLAIM
A	$150	81	46	56.8%	$140.06
B	160	89	25	28.1	135.52
C	150	75	38	50.6	130.93
D	150	90	—	—	120.68
E	150	102	32	31.3	118.91

*Does not include lab work or drugs or complications of concurrent illness.

CRACKDOWN ON SALE OF FREE SAMPLES

FDA officials launch national inquiry into the practice of reselling drugs given to MDs

The Food and Drug Administration is launching a nation-wide crackdown on sale of drug samples which have been given to physicians and detail men. It charges that the practice violates both Federal law and "sound professional ethics."

FDA Commissioner George P. Larrick took the action after spot checks showed that some repackaging firms are doing a brisk business in buying up "hundreds of thousands" of free samples from doctors—or detail men—and then marketing them.

The AMA immediately announced that its medical ethics department was looking into the situation to see how prevalent the practice is. Officials say they are confident that relatively few doctors are involved. But any reflection on the profession was viewed as awkward at this time when Sen. Kefauver and his Monopoly Subcommittee are opening an inquiry into the AMA's operations in connection with his proposed new drug control bill. The drug industry is also launching a survey of its own.

The FDA disclosed that the records of one repacking company showed that a Brooklyn physician pocketed $10,000 a year from the sale of samples. A large drug repacker in Shiller Park, Ill., from whom more than $50,000 worth of samples were seized by FDA, got drugs from doctors solicited regularly by mail.

"Dear Doctor," his letters read, "Don't throw away your surplus drugs or samples. I will buy them from you. I pay a fair, honest price. Please write or phone."

Another repacker considered it more effective to offer office supplies in return for samples, and he sought to assure doctors that doing business with him was proper.

After some high-level prodding, Commissioner Larrick launched a spot-check in the New York-New Jersey area to see if a nation-wide investigation seemed warranted. He quickly concluded that the business of selling samples is a "mushrooming abuse." The preliminary inquiry led to seizure proceedings against two New Jersey firms: Marshel Sales Co., Palisades Park, and Fall Drug Co., Jersey City; and the I. Zonana and Bronx Drug Co., Bronx, N. Y.

In the case of the two New Jersey firms, the Government said that repacked articles included *Diuril* and *Hydrodiuril, Chloromycetin, Aureomycin, Terramycin, Equanil, Placidyl, Premarin* and *Thorazine*. It also alledged that the repackaged drugs were not labeled according to law.

One serious problem was uncovered in the case of the Shiller Park firm. FDA inspectors found bottles containing the potent anti-depressant *Tofranil* labeled as *Donnazyme*, a drug for mild gastrointestinal conditions, or as "*Albee* with Vitamin C," a non-prescription vitamin.

The nation-wide investigation being launched by the FDA has the strong backing of Health Secretary Abraham A. Ribicoff, and will be pushed in all sections of the country. It is expected that the Internal Revenue Service will also take a hard look at tax records of doctors found to have given samples to suppliers.

The whole issue may also get an airing in the new Kefauver drug control hearings. Informed sources told MEDICAL WORLD NEWS that the Senator "has ordered the AMA to be prepared to answer a lot of really tough questions in its testimony."

Among other things, the Kefauver Subcommittee asked about the organization's earnings from the *Journal* and other official publications and why the Council on Drugs abandoned its testing of drugs. The Committee made it clear that it intends to go into the AMA's operations in a detailed way. ■

AMA FINDS SAFETY IN NUMBERS AT GOVERNORS AGING PARLEY

On opening day of the Governors Conference on Aging in Washington, Health Secretary Abraham Ribicoff declared pointedly:

"We are convinced that the only practical way to meet the cost of medical care for the aged is under Social Security."

And in a message to the conferees, President Kennedy himself urged:

"We must provide Social Security benefits adequate to maintain a decent standard of living and buttressed against the burdens of inflation and serious illness."

But if the Administration hoped to get new support for its program during the Conference, it was disappointed. When the meeting got underway, a quick head count showed that no less than 32 of the delegates were physicians in good standing with the American Medical Association.

AMA officials, in fact, claimed they had engineered this "coup" to prevent organized labor and the Administration from using the Conference as a springboard to line up powerful political support for the Social Security approach to health coverage.

There was at least one doctor on each of 25 different state delegations. Among them was the AMA's articulate debater, Dr. Edward R. Annis of Miami. On the other side of the fence there was only one labor leader, Charles Odell of the United Auto Workers, and he confessed he felt very lonely. The meeting was "supposed to be all about detailed planning of aged care programs in the states," Odell told MEDICAL WORLD NEWS. "Yet most of these doctors knew nothing about their state programs and had nothing to do with them officially."

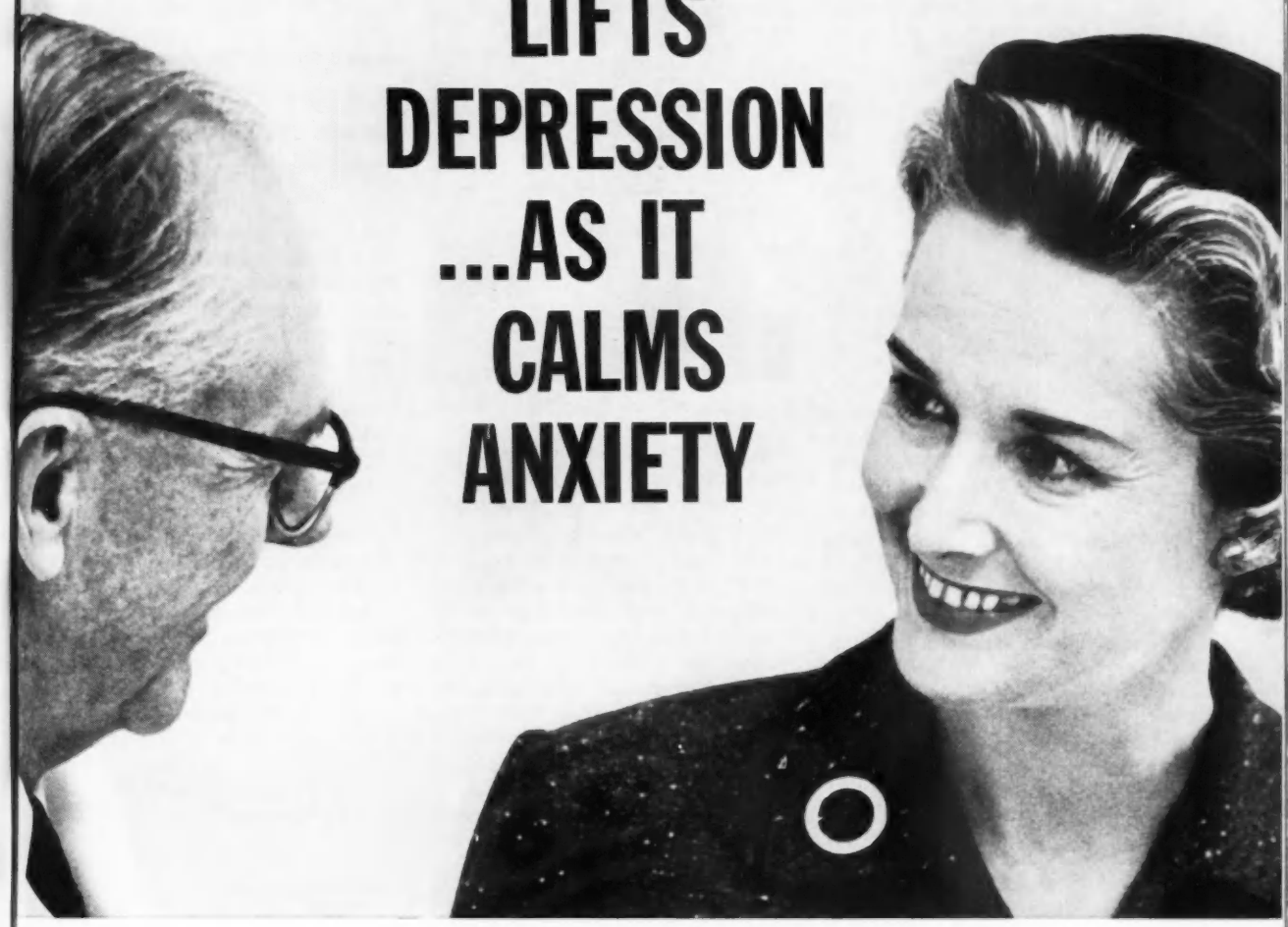
Doctors Are Citizens, Too

Dr. Annis shrugged off Odell's comments, remarking that "the appointments simply show that the governors recognize that physicians are citizens, too—citizens very much interested in the care of our aged population."

In his invitational telegram, Sec. Ribicoff said the meeting was called "to consolidate gains" and "to assure continuing vigor and purposeful direction in bringing about implementation of the recommendations of the

CONTINUED ON PAGE 22

LIFTS DEPRESSION ...AS IT CALMS ANXIETY



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AGING PARLEY CONTINUED

White House Conference on Aging."

The AMA, however, was wary. First, the meeting was being scheduled just in advance of the Conference of State Governors, where an endorsement of the Social Security approach would be useful. It also was coming on the eve of crucial hearings before the House Ways and Means Committee.

But most of all, the AMA felt that portions of the Secretary's telegram of invitation seemed aimed at barring doctors as delegates and, presumably, "loading" the meeting in favor of the pro-Social Security forces. In this portion, Ribicoff said "we anticipate that the state officials will be individuals who will have a continuing responsibility in their states for coordination of aging programs in either a staff or policy capacity, and that most of them will have background in related program activities that they can share with others at the meeting."

This provision seemed to rule out most physicians. So the AMA command in Chicago quietly began prodding state medical associations to urge their respective governors to name physicians as delegates to the Washington parley. The campaign proved eminently successful.

Some states — Indiana, Louisiana, Maine, Nebraska, Nevada, New Mexico, Oregon, South Dakota, West Virginia and Wyoming — were represented only by doctors.

DR. HOWARD calls delegates to caucus.

On the eve of the meeting, the AMA called a caucus in a downtown Washington hotel. Presiding was Dr. Ernest B. Howard, AMA executive vice-president. The topic: strategy to be followed by the physician-delegates during the meeting. While there was some sentiment in favor of launching an all-out assault against the Social Security approach, the prevailing view was that the doctors should not start a fight unless the other side opened up first.

Thus, during the workshops and general meetings, Dr. Annis and his colleagues were relatively restrained. They limited themselves for the most part to emphasizing the success of the Kerr-Mills program for the needy aged, implying that sterner measures were unnecessary.

From their point of view, both Dr. Annis and the AMA found the outcome of the meeting satisfactory. There had been no spectacular gains, but neither had there been a major defeat.

The delegates had made considerable progress in exchanging views on various problems they were encountering in administering the Kerr-Mills program. One possibly significant development was seen in the opinion that a state could provide needy aged with voluntary health insurance coverage under the Kerr-Mills program. Dr. Jack Redman said his state — New Mexico — would immediately draft a plan along these lines. ■

Senate Finding

A Senate report indicates that only 10,000 aged persons have been added to benefit rolls under Kerr-Mills legislation passed by Congress in September, 1960. It also points out, however, that 25 of the states are expected to take steps to receive Federal assistance for voluntary programs by Jan. 1, 1962.

The report comes from the Special Senate Committee on Aging, headed by Sen. Pat McNamara (D-Mich.).

The study shows that 27,000 persons have received help from seven Federal-state programs since they were put into operation last October. It notes that 17,000 of these had previously received medical care through state old age assistance programs and had been transferred to the new programs.

PREMATURE CHI

New psychiatric study suggests that early birth makes the child slower in learning day-to-day tasks than the full-term infant

In the course of their daily routine at Montreal Children's Hospital, Dr. Hyman Caplan and his associates were struck by the fact that many of the patients with motor integration, language and learning disorders, and problems of space-time organization, also had a history of paranatal complications.

In fact, these phenomena occurred with such frequency that it was suggested that infants who have troubled births start out with a handicap which they never really shake off.

To confirm or disprove this impression, the psychiatrists decided to do a study on a group of children who were normal in every sense but one—prematurity.

With fellow psychiatrists Drs. R. Bibace and M. S. Rabinovitch, Dr. Caplan culled 20,000 hospital records in order to find 50 premature children that met his criteria: a gestation period at least one lunar month short of full term and a birth weight between 1,500 and 2,250 gm.

They compared this group of prematures with an equal number of normal, full-term children at two age ranges, 7-8 years and 11-12 years. All the children were male and all were of approximately the same socio-economic group—middle class. All were normal on pediatric medical examination, with IQs ranging from 90-140.

Each child was thoroughly examined medically, including a careful pediatric and neurologic work-up, skull x-rays, electroencephalograms, blood and urine analyses and tests of vision and hearing. An exhaustive developmental history was obtained, and a battery of psychological tests determined both cognitive organization and motor behavior.

The situation within the families was also assessed by individual psychiatric interviews with the mother and father, as well as the child, and by a social worker in a series of home visits.

At the Third World Congress of Psychiatry in Montreal, Dr. Caplan

CHILDREN 'NEVER QUITE CATCH UP'

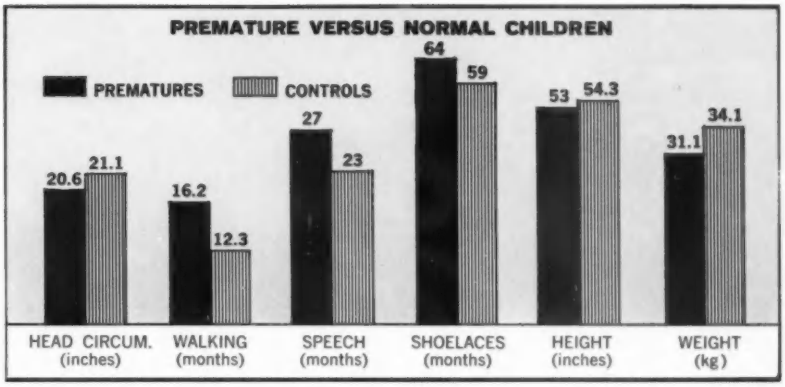
presented some significant observations from their study:

▸ Contrary to much earlier thinking, the investigators found lags in development that extended far beyond the first two or three years of life. In fact, "one of our more unexpected findings was that in a number of tests of cognitive ego functions, the 11 to 12-year-old group showed significantly greater differences than the younger seven to eight-year-olds," Dr. Caplan added.

▸ When the EEGs from the 12 "dullest" prematures were compared with the EEGs from the 12 "dullest" normals, the prematures had a higher proportion of abnormal readings.

▸ On the average, the prematures were 1½ inches shorter and 2½ kilograms lighter than the normals. The mothers of the prematures, however, averaged 1 inch shorter and 1 kilogram lighter than the mothers of the controls. The older group of prematures were 1 inch shorter and 3½ kilograms lighter than the corresponding group of normals.

▸ There was a constant trend in favor of earlier mastery of day-to-day tasks by the control group in both ages. The mean age of walking, for example, was 12.3 months for the controls, while the prematures took four months longer to walk. Use of sentences was mastered by the controls at the age of 23 months, but not until 27 months of age by the premature children tested.



▸ The controls were able to tie their shoe laces by 4 years 11 months of age, but the same skill took the prematures until age 5 years and 4 months. Ball catching, bicycle riding, swimming, all revealed differences, always in favor of the controls.

While Dr. Caplan acknowledges that this sort of data is "retrospective and subject to many sources of error," he points out that "the consistency is very striking."

▸ A clear preponderance of "problem children" occurred in the premature group while most of the children in the control group were well adjusted.

▸ The families of prematures were more "growth inhibiting"; they had more anxieties about their children than the families of the controls. Parents were more indulgent, less decisive and, in general, lacked confidence and doubted their ability to manage their children.

On the whole, the prematures revealed less intelligence than the controls, as measured by the full-scale Wechsler Intelligence Tests. In the younger group, the controls were only slightly more intelligent than the prematures, but in the older group, the controls were significantly superior. The difference was mainly accounted for by the performance rather than by the verbal IQ, said Dr. Caplan. In tests which required physical coordination and integration of perceptual and motor skills, the prematures were again inferior to the normal children.

In short, Dr. Caplan suggests, the premature infant may never catch up with the normal child born at term.■

WIDE RANGE OF MENTAL ILLS LINKED TO PARANATAL PROBLEMS

A study of 286 psychiatrically abnormal children at the Creedmoor Hospital in Long Island, New York, has revealed that the mothers of 191 (approximately 66 per cent) had complications of pregnancy or delivery. "A figure," said Dr. Gloria Faretra, "which exceeds by far that given in similar studies of controls."

Dr. Faretra's study, done in association with Dr. Lauretta Bender, drew patients from three sources: 132 cases from the Child Guidance Clinic of New York Infirmary; 42 cases from the private practice of child psychiatrists; and 112 patients admitted to the new child unit at Creedmoor.

The children were grouped under three principal diagnostic criteria; half were childhood schizophrenics; one-third suffered from organic brain syndromes; the remainder consisted of children who were not considered to have schizophrenia or organic disease, but who had wide behavioral and adjustment reactions, reading disabilities and environmental deprivation.

Drs. Faretra and Bender then grouped all the children whose mothers had experienced an abnormal pregnancy, such as bleeding, toxemia symptoms, pre- or post-maturity, any abnormality in another pregnancy, and any maternal illness; and all the children who had suffered any neonatal complications, such as abnormal delivery, respiratory disturbance or jaundice. They found that the overwhelming number of patients had one or more of these complications.

"One can add these figures in many different directions," says Dr. Faretra. "For example, all the schizophrenic children can be counted and compared; the result is 90 abnormal to 54 normal histories. Again all the cases from each clinical facility can be added and evaluated. In almost every instance, the number of cases with abnormal histories exceeds the normal.

Concludes Dr. Faretra: "The value and urgency of intensive inquiry regarding such factors in our patients' histories cannot be overemphasized."

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The basic applications

1. Correction of menstrual dysfunction. *Cyclic* therapy with ENOVID controls dysfunctional uterine bleeding (menorrhagia, metrorrhagia) and often establishes a normal menstrual cycle in amenorrhea.

2. Ovulation suppression (to suspend fertility). For this purpose ENOVID is administered *cyclically,* beginning on day 5 through day 24 (20 daily doses). The ovary remains in a state of physiologic rest and there is no impairment of subsequent fertility. Continuous administration for more than two years is not recommended.

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5. Endocrine infertility. ENOVID has been used successfully in *cyclic* therapy of endocrine infertility, promoting subsequent pregnancy through a probable "rebound" phenomenon.

6. Endometriosis. *Continuous* therapy with ENOVID corrects endometriosis by producing a pseudodecidual reaction with subsequent absorption of aberrant endometrial tissue.

The basic dosage

Basic dosage of ENOVID is 5 mg. daily in *cyclic* therapy, beginning on day 5 through day 24 (20 daily doses). Higher doses may be used with complete safety to prevent or control occasional "spotting" or breakthrough bleeding during ENOVID therapy, or for rapid effect in the emergency treatment of dysfunctional uterine bleeding and threatened abortion.

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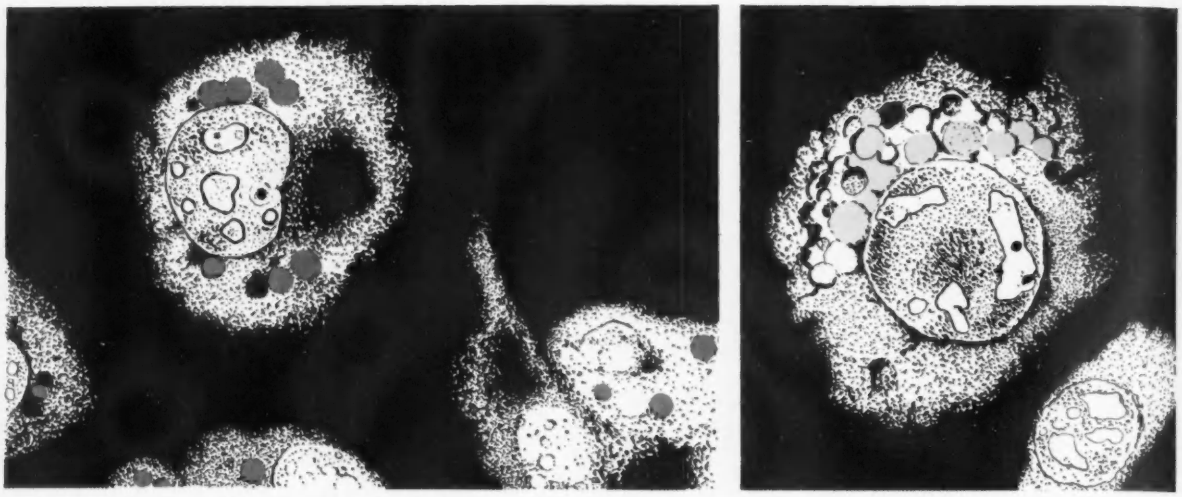


RED BALLS signal viral RNA formation by newborn trachoma agent. As organism matures (r.), infectious material increases.

THE LIFE AND DEATH OF A VIRUS

Unique fluorescence microscope study captures the vivid changes in nucleic acid activity of the trachoma agent, as it surrounds, invades, and ultimately destroys the host cells

For the first time, the microscope has captured the vivid chain of chemical events attending the birth of a virus. In photographing the life cycle of the trachoma agent, Dr. Morris Pollard of the University of Texas also has:

- Demonstrated how a drug can check virus reproduction.
- Provided a new method for screening promising drugs against the group to which the virus belongs—the psittacosis, lymphogranuloma venereum and trachoma agents.
- Uncovered the difference in action between the 'static and 'cidal types of drugs.
- Helped identify what may be one of the most effective trachomacidal drugs.

Dr. Pollard's choice of the trachoma agent for these historic studies stems from a thorny clinical problem he tackled—and solved—more than a decade ago. The increasing number of psittacosis-infected birds and of reports of consequent human infection at that time were alarming public health experts. Dr. Pollard, who is now a professor in the department of preventive medicine and public health at the University's Medical School, went to work on the problem and eventually evolved a method that would be effective in all birds, infected or not—a single inoculation of *Aureomycin* in sesame oil which served as a "depot" of chemoprophylaxis. With the cooperation of the nation's leading distributor of bird pets, the method allowed coverage for over 90 per cent of all potential psittacosis carriers.

Monitored Psittacosis Growth

In the course of these studies, the Galveston researcher became intrigued with the idea of monitoring the essential steps in the growth of the psittacosis agent to determine why drugs were effective against this virus-like pathogen but not against "true" viruses. He worked out a method of infecting human synovial cells in tissue culture, staining them with agents specific for the nucleic acids DNA and RNA, and examining them under a fluorescence microscope. Once he had this technique perfected, he applied it to other agents in the same group—particularly trachoma.

Dr. Pollard describes the details of his observations:

When normal human synovial cells are infected with the trachoma virus, the organism invades the cytoplasm where it traditionally builds inclusion bodies. Staining the cell with acridine orange reveals the yellow-green of the viral DNA and of the host's nuclear DNA.

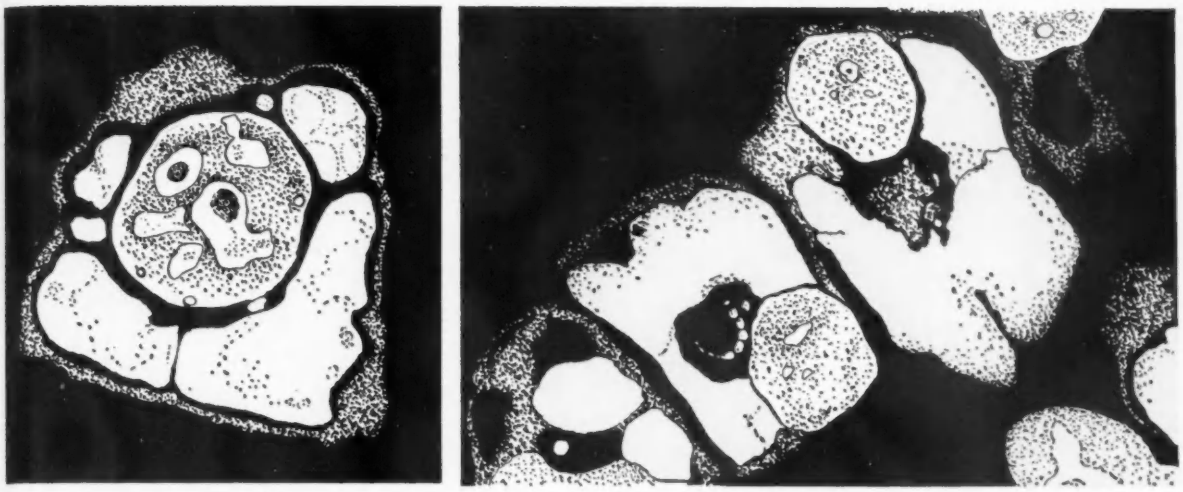
Within a few hours, the virus commandeers the cell to begin making viral materials. First, the viral DNA acquires a red coating of RNA. It is this RNA that is assigned the task of manufacturing viral protein. By the end of 12 hours, the viral DNA is completely covered with RNA, forming clearly visible "red balls" — the initial step in the formation of the mature infectious organism.

The red balls break up into still more red balls, and the cytoplasm is soon dotted with glowing spheres. At this stage, the newly developing "viruses" are not infectious; extracts prepared from such material fail to reproduce trachoma infection.

DNA Duplicates Itself

As the red balls speed up the manufacture of protein that is destined to shield the virus from the multitudinous hazards of extracellular life, the viral DNA starts its cycle of self-replication. Since the DNA, in effect, represents the viral "chromosome," it needs no help in turning out carbon copies of itself.

During this stage of viral maturation, the red balls undergo a series of kaleidoscopic changes—from red to orange, orange to yellow, yellow to yellow-green—the color mark of the



YELLOW shift in nucleic acid stain occurs as fully infective, mature "virus" fills host cytoplasm and finally bursts the cell.

mature, fully infective organism.

Finally, as the mature viruses fill the host's cytoplasm, the infected cell is depleted and shows signs of impending death. Soon the cell bursts, allowing the new viruses to escape.

However, Dr. Pollard finds, if antitrachoma agents are introduced into the picture soon after infection, there is a drastic change in the pace of reproduction. Agents known to check the spread of trachoma—without eradicating it—merely delay the formation and release of new viruses, and to some extent, cut the number that are formed. But these trachomastatic agents do not completely halt the essential step of RNA formation.

On the other hand, the procession of viral events is halted abruptly by a trachomacidal agent such as the new experimental antibiotic, tylosin tartrate, isolated by Eli Lilly chemists from the oriental strain of Streptomyces fradiae. Apparently, Dr. Pollard points out, virtually no red balls form in cells treated with this new compound, thus no viral protein is synthesized and no virus matures. In Dr. Pollard's opinion, this is the hallmark of a trachomacidal agent. Clinical trials now underway should give the final answer.

Unique Method of Replication

Virologist Pollard also believes that his experiments have clearly delineated a unique mode of replication for this particular group of agents, as distinct from the rickettsiae and the true viruses. The findings hold true not only for the trachoma and psittacosis organisms, but also for inclusion blennorrhea of the newborn, lymphogranuloma venereum, mouse pneumonitis, bovine encephalitis and undoubtedly many more still to be discovered in other mammalian species. However, the red ball type of reproductive cycle does not occur with rickettsiae such as the agent of Q-fever, or with true viruses such as vaccinia.

Thus, Dr. Pollard believes his studies make it clear that the psittacosis-lymphogranuloma venereum-trachoma group stands alone on genetic grounds, belonging neither with the rickettsiae nor the true viruses. His findings may help end a long taxonomic tug-'o-war over whether these three agents really are viruses.

If they are, why are they sensitive to drugs that fail to touch true viruses? Does this group perhaps represent a

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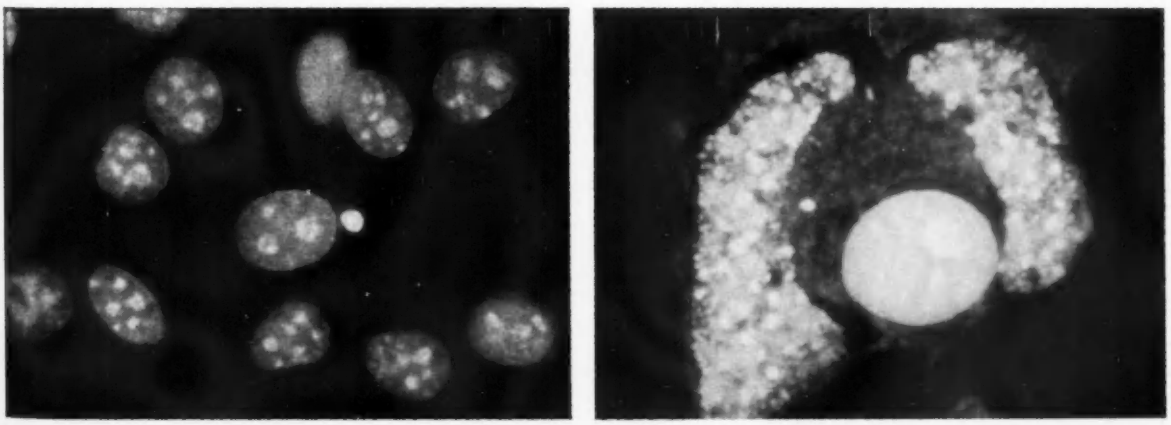

TRACHOMA agent exposed to tylosin (l.) is arrested in infancy. But streptomycin-treated organism matures and destroys host.

genetic bridge—with one foot still in the virus class and the other timidly treading among the rickettsiae?

Answers to these fundamental questions have been suggested during a two-day New York Academy of Sciences' conference on the biology of the trachoma agent.

The nub of the quandary, according to Dr. Leslie H. Collier of the Medical Research Council in London, is "our human passion for hidebound classifications. For years, we have believed that there are really only three major types of microorganisms—viruses, rickettsiae and bacteria. For the sake of simplicity and convenience, we threw the psittacosis—lymphogranuloma — trachoma group in with the rickettsiae, even though we kept on calling them viruses."

Are Grouped Together

Apparently, however, these three are a group unto themselves, scientists at the conference agreed. Dr. Collier put it succinctly: When a true virus enters a cell, it merges with the host and loses its own identity; we cannot see it as a virus. But when the large trachoma-type organism infects the host, it forms an inclusion body and we can follow its reproductive cycle from beginning to end. Thus, in one respect, it is most like the rickettsiae. But there is a crucial difference between the two: The rickettsiae multiply by binary fission; the trachoma agent clings to the viral mode of reproduction by stepping up nucleic acid synthesis. This unique cycle of the trachoma group was originally described by S. P. Bedson and J. O. Bland who, in 1932, noted that the psittacosis virus first formed an amorphous mass in the cytoplasm.

"One cannot but be impressed by the way in which recent work has confirmed the acute observations of these two earlier researchers who, like us, were exercised by the invidious problem of classifying the group," Dr. Collier pointed out.

Clarify the Enigma

There is clinical as well as academic need for clarifying the taxonomic enigma, he added. The psittacosis-lymphogranuloma-trachoma (PLT) group, like some rickettsiae, arouses antibodies, yet reacts poorly (if at all) to neutralization tests. This has been repeatedly demonstrated with trachoma-convalescent sera. More likely than not, it is this poor affinity for antibody that explains why infection with agents like trachoma tends to be chronic and relapsing, and why vaccination attempts against these organisms have generally been disappointing. On the other hand, the PLT, like rickettsiae and unlike viruses, do respond to present-day antibiotics and sulfonamides, which still offer the best means for their control.

Notwithstanding the similarities between PLT and viruses on the one hand, and PLT and rickettsiae on the other, the group is truly distinctive and merits independent status, according to the conferees. Dr. Collier underscored the point:

"Today, the evidence is much stronger for attributing a unique mode of reproduction to PLT agents. Reconsideration of their taxonomic position is timely, if not overdue. I hope that by the next edition of the *Manual of Determinative Bacteriology*, they will have been formally expelled from the Order Rickettsiales." ■

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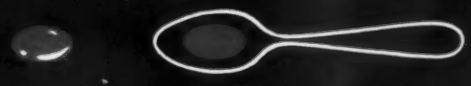

The suspension contains pyrvinium pamoate equivalent to 10 mg. pyrvinium base per cc. The sugar-coated tablets each contain pyrvinium pamoate equivalent to 50 mg. pyrvinium base. *Dosage:* Children and adults, a single oral dose equivalent to 5 mg. per Kg. of body weight. *Precautions:* Infrequent nausea and vomiting and intestinal complaints have been reported. Tablets should be swallowed whole to avoid staining teeth. Will color stools a bright red. Suspension will stain most materials.

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THEY HAVE EARS, BUT THEY HEAR NOT

A defective stethoscope can mute clinically useful sounds, warns a South Carolina MD

Stethoscope detective Dale Groom has been out borrowing his colleagues' listening tubes again. This time he discovered that most stethoscopes aren't really giving out much sound.

Several years ago, Dr. Groom, an assistant professor of medicine at the Medical College of South Carolina in Charleston, began to study ears and earpieces. Much of the time, he observed, the two are not very well matched. Sometimes, in fact, the curvature of the ear completely blocks off the hole in the earpiece.

Now he has demonstrated that hospital noise drowns out the noise in the stethoscope; a grade I heart murmur in a ward turns out to be really a grade II murmur if heard in a soundproofed examining room, according to Dr. Groom. Furthermore, after 150 years, the stethoscope itself is so unstandardized that in many cases it is "virtually useless for anything other than checking blood pressure or listening to loud bowel sounds."

Dr. Groom, who believes that time spent in auscultation is still one of the most rewarding investments in cardiac diagnosis, confirmed these findings while wandering through his hospital and listening in on the stethoscopes of 33 of his fellow physicians and interns. Only about one-third turned out to be adequate. For most, he figures mathematically, a heart murmur would have to be five times louder than it really is for the examining physician to hear it.

"By correcting the gross defects in the instruments, we got an average improvement of over 300 per cent."

Most stethoscopes, according to Dr. Groom, are too long "for efficient transmission of sounds. Ideally, they should be no more than a few inches long, but a practical length is 20 inches over-all. In many instances, the internal diameter of the tubing is too large; an internal diameter of 3/16 of an inch is a good compromise. We found that soft gum rubber tubing admits much extraneous noise, but we got significant improvement by replacing such tubes with plastic or thick-walled rubber tubes."

The worst fault of most stethoscopes, however, is leaks—leaks in the earpiece, leaks in the tubing, leaks at the change-over valve, leaks at the chest piece. Even small leaks can cause major losses and much interference from extraneous noise.

Some leaks, he points out, can be found simply by blowing into the instrument. More difficult, of course, is the problem of leaks caused by the fact that the earpiece doesn't fit the ear. "We have found remarkable variations even in the ears of a single person—variations in canal diameter, angle and elliptical contour. It appears that much could be gained by experimenting with the individual fit, in selecting the earpiece for size and in adjusting the angle, direction and pressure of its insertion."

Problem of Leaks

Then, there is the problem of outside noises leaking into the stethoscope. This involves what physicists call "signal to noise ratio," says Dr. Groom. The noise you are trying to listen to has to be louder than the noise you don't want to hear. Lowering the level of the "interfering" noise gives you a better chance of hearing the "signal" noise.

Hospitals may be allegedly quiet places, but a sound-level meter sometimes tells a different story. In some wards (particularly pediatrics), the level can rise to a practically screeching 70-75 decibels.

"All of us have become accustomed to these unremitting human and mechanical noises and we are largely unaware of them," says Dr. Groom. "But they can be an absolutely limiting factor in the detection of low-intensity sounds."

By applying a few elementary soundproofing measures to the average examining room, however, the noise level can be reduced to a soothing 35 decibels.

"We have done it for less than $500 per examining room, applying inexpensive acoustical tile to its walls, ceiling and door, closing off the windows, sealing all cracks.

"We tested the effectiveness of this soundproofing on 40 physicians. When their thresholds for a heart murmur were measured in this soundproofed room, then compared with their thresholds on the ward, there was an average difference of about 11 decibels. This meant that their ability to detect a faint murmur had been increased on an average of about 12 times by the soundproofing.

"The resultant improvement was far more impressive to clinicians who use the room than any measurements in decibels that one could cite. It has contributed immeasurably to the auscultatory evaluation of problem cases, of patients in the ward who have questionable or debatable stethoscopic findings. It has proved of great value in the examination of patients before and after cardiac surgery and with patients who are suspected of having rheumatic heart disease.

'SCOPE tester sees what he can hear.

"Certainly the principles applied to this room can be applied effectively and inexpensively in any MD's office."

Finally, advises Dr. Groom, "A few minutes devoted to the critical appraisal of the stethoscope can oftentimes be surprising. The instrument is very simple, after all, requiring only simple measures for improvement. There is no magic in its acoustical properties." ■

FOCUS OF CONCERN in childhood leukemia

HUNT IS ON IN LEUKEMIA 'OUTBREAKS'

Clusters of cases prompt a coordinated nation-wide search for evidence of infection

Clues pointing to the possibility that acute leukemia is transmissable had been piling up with tantalizing speed. In half a dozen states, suspiciously grouped deaths had been reported.

Then public health authorities were alerted to a most unusual clumping of illnesses among school children in suburban Niles, Ill.

Nagged by the possibility that the clumping pattern might be repeating itself across the U.S., a battery of experts met at the National Cancer Institute to see what might be done. For an entire day, they analyzed the Niles cases and reviewed other less spectacular but suspicious incidents. Then they made some decisions.

First, they agreed to launch an exhaustive study of national leukemia mortality statistics, checking for possible temporal and geographical links.

They also decided to set up an alerting system so that researchers and public health officials could move fast to investigate any suspected outbreaks, while the facts were still fresh.

And they agreed to make a series of reports on the Niles experience and other suspicious incidents, in hopes of stimulating physicians to be on the lookout for similar clues.

Dr. Michael B. Shimkin, head of the Cancer Institute's biometry branch

outbreak is this parish school in Niles, Ill.

and chairman of the special meeting, told MEDICAL WORLD NEWS, "I am convinced there is something here if we can only find it. Everything seems to point to this being a transmissible disease."

No case reports in the 50 years since scientists first suspected the possibility that leukemia is infectious quite compare to the Niles experience, Dr. Shimkin notes. There have been isolated reports of a few possibly associated cases. And in Buffalo, Dr. Donald Pinkel and associates of Roswell Park Memorial Institute and the University of Buffalo School of Medicine found that childhood leukemia cases between 1943 and 1956 showed certain relationships in incidence and locale "of suggested significance."

But "in terms of close association, in both time and geography, this is the most clear-cut example of all," according to Dr. Shimkin. "I don't know of anything else that is nearly as striking. The cases certainly behaved like an outbreak. The most logical explanation is that there was something transmissible."

The eight Niles cases were diagnosed between September, 1957, and August, 1960. The children were all unrelated. None of their parents were acquainted with any of the other parents. They were all seen by different physicians, and sent to different hospitals.

But the cases, fortuitously, came to the attention of Dr. Robert J. Hasterlik of Chicago's Argonne Cancer Research Hospital and Dr. Steven O. Schwartz of the Hektoen Institute, who are among the leading proponents of the virus theory of leukemia.

A full investigation was called, under the direction of Dr. Clark W. Heath, Jr. of the epidemic intelligence service of the Public Health Service's Communicable Disease Center in Atlanta. The study proved that the circumstances were indeed unusual: eight cases in three years—in a community of only 20,000 — was twenty times the national incidence rate. All the cases were lymphoblastic leukemia; all the children recently had moved to the suburb from Chicago; and all had been attending the parish school or had older brothers, sisters, or a friend in the school. Of the eight, seven were girls three to 14 years old.

Somewhere, the disease hunters were convinced, there must be a common denominator. They checked for excess radiation, took blood samples of families and victims, and ferreted out family histories all over Niles.

Working in teams of two, Communicable Disease Center personnel knocked on every fourth door in sections marked in black on maps worked out by Dr. Heath. At each home, they asked a host of questions regarding the family's disease experiences, immunization records, and even such incidental intelligence as age of house and type of fuel used.

For family members under 20, the questions were more detailed, in order to pin down data on such common diseases as measles and mumps, frequency of colds and sore throats, cases of allergy, otitis media, and tonsillec-

CONTINUED ON PAGE 34

CDC DRS. Heath (l.) and Surfling brief nurses on epidemic intelligence work.

MOTHERS answer questions on family members, diseases and immunizations.

DR. GREENSPAN prepares an antibody challenge for the relatives of leukemia victims.

tomy-adenoidectomy procedures. The parents were also questioned closely about possible sieges of illness.

The study failed to produce any evidence to incriminate genetic make-up, chemicals, background radiation, previous illness or any other factor.

Reviewing the situation, Drs. Shimkin, Heath and CDC epidemiologist Alexander Langmuir, decided that the next best move would be to tap the significant volume of data already available. Because acute leukemia is invariably fatal and is usually diagnosed correctly, the Office of Vital Statistics holds a mass of reliable information. Several incidents similar to the Niles outbreak have been noted: in Cheyenne, Wyo., Bergen County, N. J., Georgia and a few other places. In Hagerstown, Md., where the Cancer Institute and local authorities are conducting a long-term survey of cancer patterns, Dr. Ross Cameron found a clumping of 15 leukemia cases.

While epidemiologists continue analysis of all these facts, another approach is being tried at the Hektoen Institute by Drs. Schwartz and Irving Greenspan. They had already shown in prison volunteers that antibodies can be demonstrated against an infectious agent recovered from the brains of dead leukemia patients; that antibodies against this agent can be demonstrated in personnel routinely exposed to leukemic animals for long periods of time; and that pooled leukemic brain extracts tagged with Evans blue can reveal these antibodies in guinea pigs through a passive cutaneous anaphylaxis technique.

Now, Dr. Greenspan will challenge the human leukemia virus he is keeping alive in mice with sera from the parents, brothers and sisters of the eight leukemia victims in Niles. If he gets his spot of blue on the guinea pig's skin, he will have demonstrated the presence of antibodies among the closest contacts of these leukemic children—and will have added a large piece of evidence that, taken with the epidemiologist's results, may help close the case. As one of the experts in the Niles investigation comments:

"Leukemia and cancer viruses have been found in chickens and mice, and probably in swine. I should be surprised if man should not be like other animals in this respect." ■

PARKINSON'S DISEASE ON WAY OUT

A Massachusetts clinician finds that it has been occurring mainly in people born before 1920, and predicts that incidence will fall sharply as this population group finally dies off

Parkinson's disease "should cease to be a major clinical problem" between 1980 and 1985, says Dr. Robert S. Schwab of Massachusetts General Hospital, Boston.

The bulk of today's Parkinson cases, he reported to the American Neurological Association, stem ultimately from encephalitis or influenza infections in the period around 1920. The patients form an "epidemiological cohort"—a group of the population aging together. And the disease "should diminish as the cohort dies off."

The Boston clinician bases his prediction on statistical analysis of 871 cases treated at the hospital, with corroborative evidence from five other cities in the U.S., England, Germany and Argentina.

Dr. Schwab first began to suspect that present incidence of Parkinson's disease is abnormally high when he noted that James Parkinson himself, in the many years of his extensive London practice, saw only five cases. "Today, any of us who devote special care and interest to the disease will in a few years have a series of one to two hundred."

CNS Infection Implicated

Examining records of 1,300 patients in Boston, New York and Leeds, England, he found that the average age of all three groups had risen by seven years between 1948 and 1955. Most of the cases, he concluded, must occur within a single age-group which had suffered "a common exposure to a CNS infection, either clinical or subclinical"—presumably during the encephalitis and "Spanish" influenza epidemics which reached a peak in 1918.

Together with Dr. David C. Poskanzer, a neurologist specializing in epidemiology, and Miss Eleanore Garvey, Dr. Schwab has recently subjected his own series—and data from Kassel, Germany and Buenos Aires—to a more detailed statistical breakdown.

In the Boston series, the Massachusetts General team finds that "the group as a whole, *including all new cases* seen each year, has been getting five years older with each succeeding five-year period since 1920." In that year, the average patient was 21; today, only one out of 871 is under 30. "In 40 years, the population with Parkinson's disease has aged 39 years." And series from other countries show a similar trend.

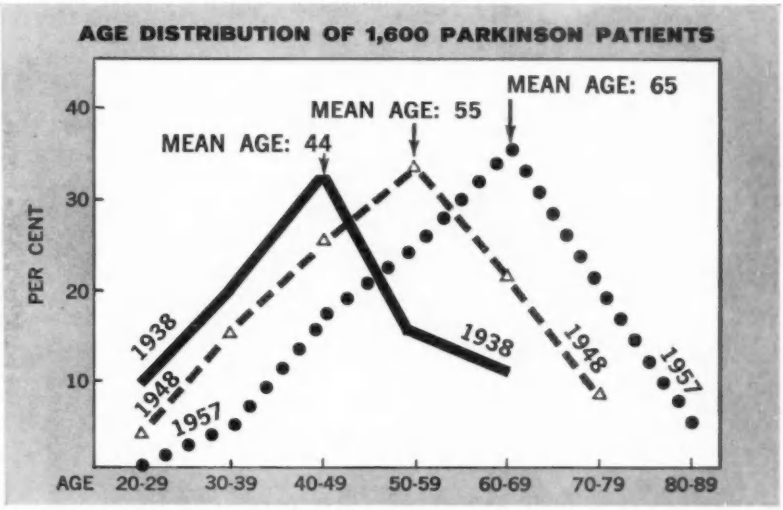
Dr. Schwab concedes that age shifts in the general population may have brought on a small proportion of the increase. But census figures for Massachusetts show that the average age has risen by only three years between 1920 and 1950; the shift was ten times as great among Parkinson patients during the same period.

Seeking to link the disease to CNS damage, Dr. Schwab has uncovered a history of diagnosed encephalitis in only a small minority of his patients. But some 60 per cent have a history of "Spanish" influenza between 1918 and 1929, "and this does not include subclinical infections or illnesses forgotten after 30 years." Several virologists, he points out, have theorized that both pandemics were caused by the same organism, though only in encephalitis cases was there frank involvement of the CNS.

It is possible that "the virus is still present and active in cells of the nervous system, a phenomenon not unknown in other virus illnesses such as herpes simplex and varicella-zoster infections." Alternatively, "damage occurring in each patient on a single occasion, years ago, results in a premature aging of the involved cells."

The Boston group also has tried to project the life expectancy of the potentially affected population group, which they calculate was mostly born between 1875 and 1919. They conclude that prevalence of Parkinson's disease "has recently passed its peak. Henceforth, almost no new cases may be expected below the age of 65"—and good risk cases for stereotactic surgery will diminish. However, "the number of living cases will continue near its present level until about 1976, because incidence of the disease increases as the cohort ages."

At that time "the curve of incidence should show a precipitous drop." In less then ten years thereafter, says Dr. Schwab, incidence of the disease should have fallen by at least two-thirds. There will still be about one case per 5,000 population: "Some new cases will certainly continue to occur, as they did in 1817 when Parkinson first described the disease." ■



SHIFT in incidence peak between 1938 and 1957 points to an "epidemiological cohort."

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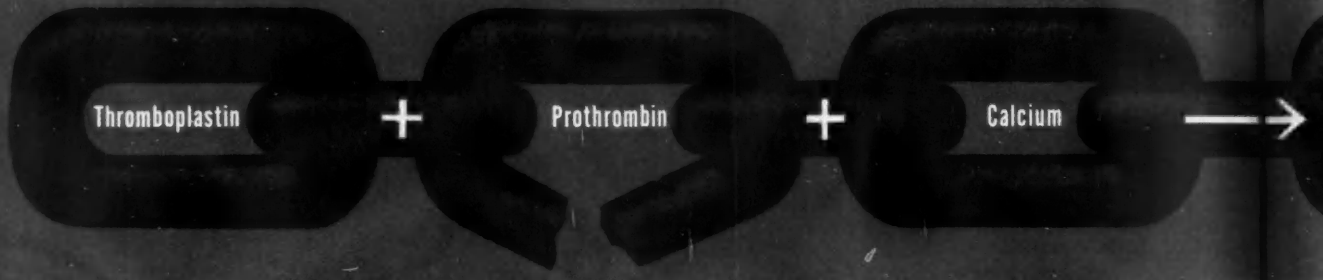

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Council on Drugs: New and Nonofficial Drugs, Philadelphia, J. B. Lippincott Co., 1950, p. 661.

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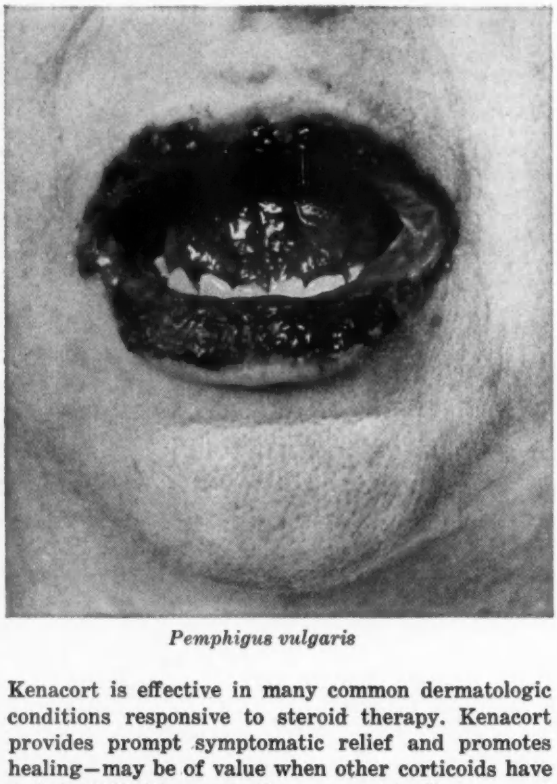
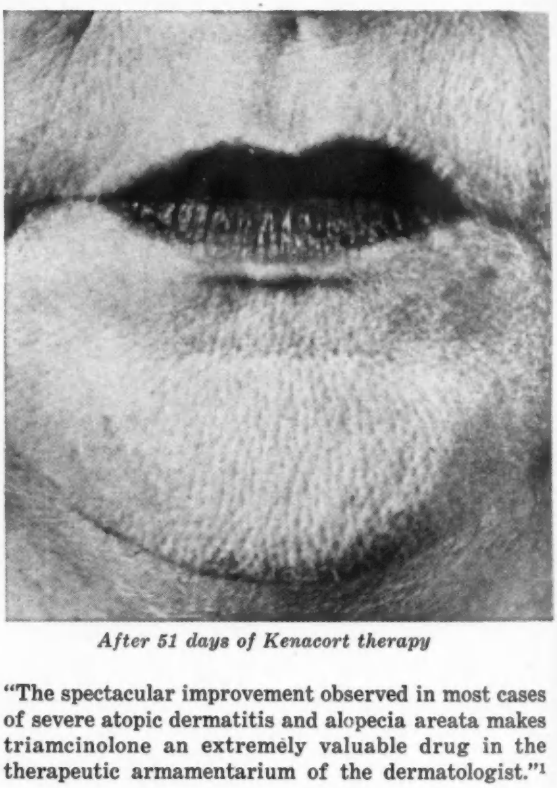


Pemphigus vulgaris



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References: 1. Edelstein, A J.: Pennsylvania M. J. *62*:1831 (Dec.) 1959. 2. Smith, J. G., Jr.; Engel, M. F.; and Blank, H.: J. Florida M. A. *46*:960 (Feb.) 1960. 3. Robins, H. M.: New York J. Med. *61*:717 (Mar. 1) 1961.

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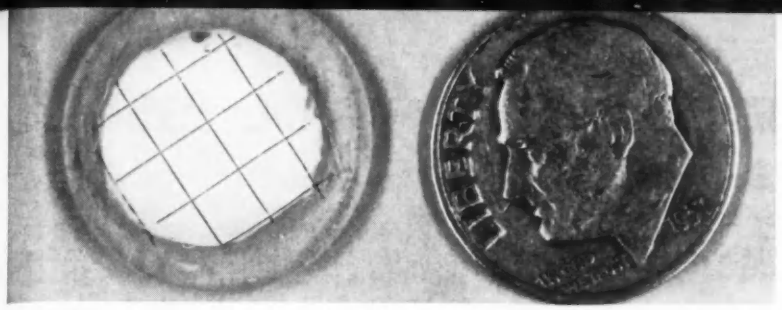
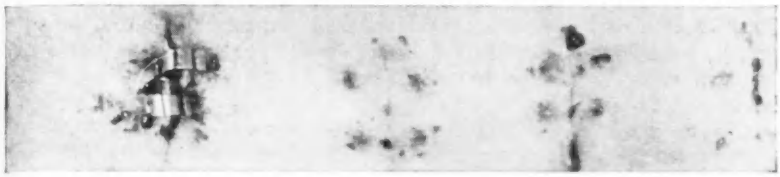


DIME-SIZED micropore chamber (above) imprisons leukocytes but lets fluid through. Several of them are subcutaneously implanted (below) in the chest of a volunteer.



DR. PETRAKIS AND THE MYSTERIOUS LEUKOCYTES

California researcher finds white blood cells have an amazing ability to metamorphose

Among hematologists, it's been a long-standing controversy: Are leukocytes mere phagocytic scavengers that eventually just fade away? Or can they evolve to become completely different structures — hematopoietic cells, connective tissue, or early bone cells?

This debate, started in 1876 by a German researcher who first observed that white blood cells can leak through undamaged vessel walls, may now be closing. Dr. Nicholas L. Petrakis, of the Cancer Research Institute at the University of California Medical Center, has shown beyond doubt that some white blood cells have the rather amazing ability to metamorphose into fibroblasts, fat cells, bone marrow and bone cells.

The main obstacle in solving the controversy has always been the difficulty in following the fate of individual leukocytes as they circulate with other cells in the blood. But Dr. Petrakis, to settle the question, reversed the order of things: he made blood circulate through the leukocytes.

His technique consisted of imprisoning white cells in dime-sized plastic boxes, which are planted under the skin of volunteer subjects. The boxes—known as diffusion chambers or micropore filters—have holes large enough to let the fluid part of the blood flow through, but small enough so that no leukocyte can get in—or get out. The chambers were removed and reinserted at weekly intervals for a period of six weeks.

During the first two weeks, the leukocytes appeared to hypertrophy into cells having the morphology of macrophages and histiocytes. At three weeks, they had taken the star-like or spindle-shaped form of fibroblasts. By three to four weeks, the surfaces of the membranes were covered with dense sheets of fibroblasts in parallel rows or in interlacing patterns.

Ink in the Fibroblasts

To confirm that an actual transformation was occuring, India ink was added to the cells when the leukocytes were sealed into the chamber. In two weeks, the ink was found in the macrophages and, by the fourth week, in the cytoplasm of the fibroblasts.

Dr. Petrakis and his co-workers—Miss Mary Davis and Salvatore P. Lucia—found several other structures indicating the versatile nature of the leukocytes. Some were fat-containing cells. In two studies, there were capillary-like structures. In another, the cell nuclei aligned themselves along the length of a cotton fibril inadvertently dropped into the chamber at the time of sealing, showing the macrophage-like character of the white blood cells. In animal experiments, bone and marrow cells were found.

The logic behind the transformations, says Dr. Petrakis, can be found in embryology. For all these cells are ultimately derived from the mesenchyme, that portion of the embryo which gives rise to the entire connective tissue structure of the organism, to the blood vessels and lymph vessels, the bone marrow or blood forming structures, tendons, and to some of the normal fatty deposits.

The U. of C. team also attempted to explore the effects of vitamin C deficiency on the white cells—which are normally loaded with it. First, they put a number of guinea pigs on vitamin C-deficient diets. The animals developed scurvy and died four or five weeks later. Meanwhile, blood samples had been withdrawn, leukocytes extracted and buried in diffusion chambers under the skin of normal guinea pigs. In a few days, the cells became normal.

Furthermore, when normal leukocytes were transplanted under the skin of normal guinea pigs, they matured and changed into useful fibroblasts within a week, eventually producing connective tissue—as expected. But white blood cells removed from healthy guinea pigs and transplanted into scorbutic animals piled up in formless heaps in the box. They divided rapidly, and ballooned into monstrously enlarged cells. When the animals were returned to a vitamin C-rich diet, however, the white cells regained their health—as did the guinea pigs.

Although it is generally acknowledged that the connective tissues are affected in scurvy, most investigators hold that the site of action is extracellular, says Dr. Petrakis. His studies, he points out, indicate a direct cellular role of ascorbic acid in the differentiation of mononuclear leukocytes to fibroblasts. Also, he notes, the findings open an area of speculation as to the possible relationship of ascorbic acid deficiency to the lack of cellular differentiation found in leukemia. The U. of C. group has found that white cells from leukemic patients go on producing more leukemic cells, whether they are boxed under the skin of normal or leukemic patients. Normal white cells implanted under the skin of leukemic patients, however, remain normal. ■

JUSTICES AVOID BIRTH CONTROL ISSUE

Supreme Court majority calls suit over Connecticut's law 'too abstract.' Dissenting Justice Harlan, however, describes the five-to-four decision as a legal 'bit of sleight-of-hand'

"Don't decide a question until you must" is the U.S. Supreme Court's oldest, most revered precept.

It came into play in the case of the Connecticut birth control law, which the high tribunal found not ripe for a ruling. As a result, the state law prohibiting use of contraceptives remains intact.

The nine Justices had varying views on the issues raised in the case. Indeed, they couldn't muster a majority to explain the judgment dismissing the case.

Justice Felix Frankfurter spoke in the majority opinion. He said he did not feel that Dr. C. Lee Buxton, the Yale University obstetrician who charged that the Connecticut law violates his constitutional right to practice medicine as he sees fit, was in any real danger of prosecution from state authorities. Nor are "Paul and Pauline Poe" and "Jane Doe"—the unidentified persons who joined him.

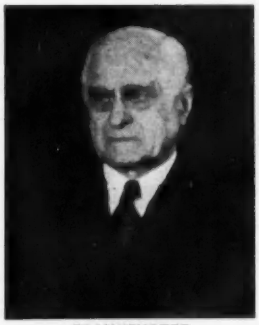
During the more than three quarters of a century since the enactment of the law, Justice Frankfurter said, there has been only one prosecution. The circumstances of the one case "only prove the abstract character of what is before us," he declared.

"The unreality of these lawsuits is illuminated by another circumstance," Frankfurter added. "We were advised by counsel for appellant that contraceptives are commonly and notoriously sold in Connecticut drug stores. Yet no prosecutions are recorded, and certainly such ubiquitous, open, public sales would more quickly invite the attention of enforcement officials than the conduct in which the present appellants wish to engage—the giving of private medical advice by a doctor to his individual patients, and their private use of the devices.

"With due regard for Dr. Buxton's standing as a physician and to his personal sensitiveness, we cannot accept as the basis of constitutional adjudication, other than as chimerical, the fear of enforcement of provisions that have during so many years gone uniformly and without exception unenforced," the opinion said.

With these sentiments, Chief Justice Earl Warren and Justices Tom C. Clark and Charles E. Whittaker agreed. Justice William J. Brennan, Jr., also voted to dismiss the case but he had a word of his own.

"I am not convinced, on this skimpy record, that these appellants as individuals are truly caught in an inescapable dilemma," he said. "The true controversy in this case is over the opening of birth control clinics on a large scale; it is that which the state has prevented in the past, not the use of contraceptives by isolated and individual married couples. It will be time enough to decide the constitutional questions urged upon us when, if ever, that real controversy flares up again."



FRANKFURTER

BRENNAN

HARLAN

Justices Hugo L. Black and Potter Stewart dissented on the ground that the issues presented by Dr. Buxton and the other complainants should have been faced and decided. They did not discuss these issues. Justices William O. Douglas and John M. Harlan, however, did — and they found the law unconstitutional.

In a 34-page opinion, Harlan rejected "lack of prosecution" as a reason for not considering the constitutional issues.

"I find it difficult to believe that doctors generally—and not just those operating specialized clinics—would continue openly to disseminate advice about contraceptives (after the 1940 case) in reliance on the state's supposed unwillingness to prosecute, or to consider that high-minded members of the profession would in consequence of such inaction deem themselves warranted in disrespecting this law so long as it is on the books.

"Nor can I regard as 'chimerical' the fear of enforcement of these provisions that seems to have caused the disappearance of at least nine birth control clinics. In short, I fear that the Court has indulged in a bit of sleight-of-hand to be rid of this case."

Turning to the law, Harlan said:

"I believe that a statute making it a criminal offense for married couples to use contraceptives is an intolerable and unjustifiable invasion of privacy in the conduct of the most intimate concerns of an individual's life.

"Adultery, homosexuality and the like are sexual intimacies which the state forbids altogether, but the intimacy of husband and wife is necessarily an essential and accepted feature of the institution of marriage, an institution which the state not only must allow, but which always and in every age it has fostered and protected. It is one thing when the state exerts its power either to forbid extramarital sexuality altogether, or to say who may marry, but it is quite another when, having acknowledged a marriage and the intimacies inherent in it, it undertakes to regulate by means of the criminal law the details of that intimacy," Harlan declared.

"What are these people [doctor and patients] to do?" Justice Douglas asked. "Flout the law and go to prison? Violate the law surreptitiously and hope they will not get caught? By today's decision we leave them no other alternatives." ■

Editor's Choice

Abstracts of articles concurrent with publication in leading specialty journals

MEDITERRANEAN FEVER TREATED WITH LOW-FAT DIET

Pickles and bacon may not be included in any listing of pyrogens, but a breakfast of these two items may bring on an attack of familial Mediterranean fever.

Eight patients with this mysterious disease were placed on a low-fat diet and in every case the number of typical attacks was markedly reduced. The few attacks that did occur resulted from willful and injudicious departure from the prescribed diet: to wit, a large helping of pickles and bacon—or butter and pastry. Several of the patients reported that even minor dietary indiscretions, such as taking just "a bit more" meat than allowed, precipitated mild attacks two to 12 hours later. The amount of fat allowed was considerably below the customary intake for these patients. In the eight who were followed for intervals of 172 patient-weeks, there seemed to be little doubt that a fairly drastic curtailment of fat intake—to about 20 gm a day—was followed by marked improvement in the overt manifestations of their hereditary condition.

Why the low-fat diet prevented the attacks, and, indeed, why the attacks occurred in the first place, still poses as great a mystery as ever. Thus far there has been no evidence of any significant alteration in serum lipids, before or after the diet. And it is not even certain that the fundamental hereditary metabolic defect is related to fat metabolism. While dietary fats at this time appear to be the chief suspects, it is conceivable that some inadvertent and coincidental change in the diet is the critical factor. *Mellinkoff, Schwabe and Lawrence; AMA Arch. Int. Med., July 1961, pp. 82-87.*

ADDISON'S DISEASE PLUS DIABETES CREATES THERAPEUTIC CONFLICT

A growing list of reports on the association of Addison's disease with diabetes mellitus makes it likely that this combination could be encountered by the general practitioner.

When Addison's disease and diabetes occur in the same patient, they present therapeutic problems that are not encountered in the management of either separately. On the one hand, Addison's disease reduces the insulin requirements of the diabetic, but on the other, it aggravates the patient's condition by increasing the lability of the diabetes—sometimes to such an extent that it is apt to be the most difficult aspect of management. Moreover, the endocrine and metabolic alterations in each of the diseases conflict with one another.

Some disturbance of carbohydrate metabolism is to be expected in those with Addison's disease. The fasting level of glucose in the blood is low or normal, and the response to ingested glucose is less than normal. This situation produces the so-called flat oral glucose tolerance curve, which frequently is followed by an episode of hypoglycemia. Intravenous glucose produces a prompt rise in blood sugar, often succeeded by profound hypoglycemia and severe symptoms, with many features characteristic of an Addisonian crisis. Corticosteroids prevent hypoglycemia and revert the carbohydrate picture to normal. Tolbutamide or other oral hypoglycemic agents should be tried in place of insulin in these cases. *Wehrmacher; AMA Arch. Int. Med., July 1961, pp. 106-13.*

GRAFTED VESSELS DEVELOP ATHEROMATOUS DEPOSITS

Do synthetic grafts fall heir to some of the ills of the human vessels they replace? Apparently, the answer is "yes."

Although it has been generally assumed that synthetic grafts do not develop atheromatous changes, this view appears to be erroneous. These substances show atheromatous changes in both experimental animals and in humans. Experimentally, rabbits were made hypercholesteremic postoperatively, by high-cholesterol diets. When sacrificed seven weeks after surgery, all the grafts were still patent. Gross inspection, however, revealed a thin, smooth, creamy, white lining on the inner layer of the synthetic materials, as well as on the inner layer of the intima of the adjacent aorta. The histolgic findings correlated well with those obtained from clinical specimens. Sections of a synthetic bifurcation graft of the aorta, taken from a patient 25 months after surgery, similarly showed a loose fibrinous pseudointima, containing fat deposits.

Control animals on a normal diet low in cholesterol had a much thinner and firmer fibroblastic pseudointima after nine months than did animals that had been given a high-cholesterol diet for four weeks. Thus, the early postoperative period may be the crucial time for formation of the thick atheromatous layer. *Tarizzo et al; AMA Arch. Surg., June 1961, pp. 38-44.*

RARE CHILDHOOD CANCER LINKED TO IRRADIATION

A total of 562 cases of childhood thyroid carcinoma have been collected from all parts of the world. Of these, 315 have been published. The remainder were located through a survey of children's hospitals and larger hospitals in the U. S. and Canada, and through personal surveys in a number of other countries. During the past five years, 148 new cases have been reported.

About 80 per cent of the total cases of childhood thyroid cancer came from this country. It would appear that the incidence, however, is unrelated to any specific geographical region.

Of the children with thyroid carcinoma, 38 per cent are known to have received therapeutic doses of irradiation in infancy and early childhood. If accurate histories could be obtained in all cases, it is believed that the percentage would be considerably higher. Attempts were made to obtain a history of previous irradiation in only 277 cases—80 per cent of these had a positive history—with the majority having received x-ray therapy for so-called enlarged thymus. X-irradiation treatment was most popular in this country between 1940-1950. A definite increase in thyroid cancer was most evident between the years 1945 and 1957.

While the data in this study do not prove that x-rays during infancy cause thyroid carcinoma, an undeniable relationship must be admitted. Most of the tumors classified were papillary carcinomas but all types were represented. *Winship and Rosvoll; Cancer, July-Aug. 1961, pp. 734-43.*

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DOCTOR'S BUSINESS

Interest rates are lower and will continue to slide fractionally for the next few months. Money is also easier to get for financing building projects or for short-term loans. Doctors planning to build a new clinic or expand office space should find the financing picture this summer definitely in their favor. Loans for equipment or personal needs will also be less difficult to find than a year ago.

How does the AMA stand financially? In a June report to the House of Delegates meeting in New York, the Board of Trustees said that in 1960 the organization took in $225,000 more than it paid out. The Trustees gave this breakdown on the sources of income: 50.1 per cent from the sale of advertising in AMA publications, 22.8 per cent from members' dues, 14.4 per cent from outside subscriptions, three per cent from the sale of exhibit space at meetings, another three per cent from investments, and 6.7 per cent from miscellaneous sources. Biggest item of expense: $6,552,000 (41.7 per cent) for paper, printing and mailing costs.

Medical societies, schools, hospitals and other groups are looking into the cost of video-taping meetings, operations, lectures, exhibits and special programs. Permanent color and black-and-white tapes can be rerun instantaneously, played back later or transcribed to film. Tapes are less expensive than standard film productions, according to Special Projects, CBS Television Network, 524 West 57th Street, New York 19, N. Y.

Poor credit risks can be spotted in advance, according to the Credit Bureau of Greater New York. Among those who may not pay their bills promptly, says the Bureau, are residents of rooming houses, furnished apartments, hotels or similar transient accommodations; commission salesmen; divorced or separated women and retired persons lacking good references; single people just arrived in a new town. Not all individuals in these categories are going to ignore their bills, of course. But the Credit Bureau maintains that long experience indicates care should be exercised in permitting members of these groups to run up substantial obligations.

Colorado's widely discussed program of medical care for the aged has run into serious financial trouble. A $1.4 million deficit is now expected. With costs far outstripping the $10 million a year budgeted for the project, officials are ordering cutbacks all along the line. Hospitals are to be used only in emergencies and maximum free stay is being cut from 21 to 18 days. Free ambulance service is being eliminated and home nursing care will be cut to absolute essentials. Colorado's experience is causing officials in other states to re-evaluate their plans for setting up similar programs to get Kerr-Mills matching funds. North Dakota and Tennessee, for example, are building strong safeguards against overuse into their medical care for the aged programs.

A definite improvement in business is in sight for the second half of the year, according to many Government sources. Employment is rising, incomes are going up. The gross national product is expected to reach an annual rate of $525 billion by year-end, compared to about $500 billion at the start of the year. Another bullish sign: Consumers are showing more confidence and willingness to spend, particularly for personal services such as medical care. In effect, it means the country is coming out of the business doldrums faster and earlier than expected.

Sales gains are being chalked up by non-filter cigarettes for the first time in several years. Tobacco men say the sales increase began more than a year ago, about the time the Government forced companies to stop making health claims for filters. This year, two out of three of the top selling brands will have filters.

U. S. currency may change color if the proposal now being discussed at the Treasury Department gets some added support. Treasurer Elizabeth Rudel Smith wants to keep the $1 bills green, but suggests a different color for each of the other denominations. The point is to visually help citizens distinguish big bills from little ones, and to make sorting easier in such places as banks. The Bureau of Engraving says that the idea is entirely feasible and Treasury Secretary Dillon, with whom any decision would rest, says he's interested in the plan.

Product News

FOR FUNGAL INFECTIONS

Sporastacin (Ortho), for treatment of fungal infections of the skin, contains chlordantoin 1 per cent and benzalkonium chloride 0.5 per cent. It is available in two forms, *Sporastacin* lotion for fungal infections of such regions as the axilla, groin, genitocrural fold, buccal mucosa and other involved areas; and *Sporastacin* solution for infections of the nails and paronychia.

Sporastacin provides prompt and symptomatic relief, usually within two days. Often, a single course of therapy is sufficient to produce clinical and culture-proved cures. Occasionally, slight local irritation may occur.

FOR DEPRESSION

Monase (etryptamine acetate, Upjohn) is a psychic energizer indicated for depressed patients in whom mood elevation and psychomotor stimulation would be beneficial. Initial improvement usually occurs within two or three days but maximum benefit may not be apparent for two or more weeks.

No absolute contraindications are listed for *Monase*. However, it should be used with caution in severely disturbed patients as it may activate a latent or incipient psychotic process. Side effects observed — allergic skin reactions, GI upsets and overstimulation of the central nervous system — have been mild and easily managed by symptomatic therapy or dose reduction. Patients taking antihypertensive drugs should be watched for possible potentiation of hypotensive effects.

Dosage of *Monase* is 15 mg twice daily. It is supplied as 15 mg tablets.

FOR SKIN INFECTIONS

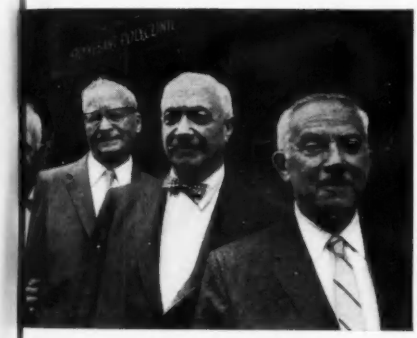
Furacin Topical Cream (Eaton) is a new dosage form of *Furacin Soluble Dressing*. It contains 0.2 per cent nitrofurazone in a water-washable, vanishing cream base that is nonrunning and stiffer than the soluble dressing. It may be used in preference to *Furacin Soluble Dressing* in treating such skin infections as impetigo and in postoperative wound infections, especially in the anorectal area. Both forms of *Furacin* are now available in 28 gm tubes.

Names in the News

Dr. Frederick J. Stare, chairman, department of nutrition, Harvard University School of Public Health, given the 1961 Joseph Goldberger Award by the American Medical Association for his outstanding work in the field of clinical nutrition. Editor of the journal *Nutrition Reviews*, Dr. Stare is best known for his studies on the relation of diet to atherosclerosis and coronary heart disease.

Dr. William Larimer Mellon took time out from his duties as director of the Albert Schweitzer Hospital in Deschapeles, Haiti, to accept the Thomas F. Cunningham Award which was bestowed on him in 1958. Founder of the hospital with his own funds, Dr. Mellon was inspired by Dr. Schweitzer to provide medical services to a remote region.

Honored for more than 50 years service each at Stuyvesant Polyclinic, New York, are, from left to right, **Dr. Samuel M. Kaufman,** director of dermatology, **Dr. Isidor L. Ritter,** chief of gastroenterology, **Dr. Samuel L. Rothberg,** head of surgery, and **Dr. Irving I. Reissman,** medical director.



Dr. John B. Youmans, director of the American Medical Association's Division of Scientific Activities, received the highest award that the Secretary of the Army can pin on a civilian—the Decoration for Exceptional Civilian Service. Dr. Youmans was cited "for his exceptional performance of duty as technical director of research for the U. S. Army Medical Research and Development Command" from 1958 to 1960.

HONORARY DEGREES

Doctor of Science: **Senator Lister Hill** of Alabama, chairman of the Senate Committee on Labor and Public Welfare, and **Dr. Donald G. Anderson,** president-elect of the Association of American Medical Colleges, from New York Medical College; **Dr. C. N. Hugh Long,** chairman of the division of biology and medicine of the National Science Foundation, and chairman of the department of physiology, Yale School of Medicine, from McGill University, Montreal; **Dr. Albert H. Coons,** visiting professor of bacteriology and immunology, Harvard Medical School, and **Sir Alexander R. Todd,** Nobel Laureate in chemistry, University of Cambridge, England, from Yale; **Dr. Thomas M. Rivers,** vice-president of medical affairs of The National Foundation (photo), and **Dr. Hugh S. Taylor,** president of the Woodrow Wilson National Fellowship Foundation, from the Rockefeller Institute.

Doctor of Medical Science: **Dr. Janet Travell,** the President's physician, **Dr. Evelyn Anderson,** chief of endocrinology, National Institutes of Health, and **Dr. Claire F. Ryder,** public health specialist, all from Woman's Medical College of Pennsylvania, Philadelphia.

Doctor of Humane Letters: **Mrs. Albert D. Lasker,** president of the Albert and Mary Lasker Foundation, from New York Medical College.

Doctor of Laws: **Dr. Marcolino G. Candau,** director-general of the World Health Organization, from the University of Michigan.

OBITUARIES

Dr. Carl Gustav Jung, 85, psychiatrist; he was the first to apply Freud's views successfully to psychotics, but later broke away from the founder of psychoanalysis to found his own school of "analytic psychology;" Jung coined such terms as "extrovert" and "introvert," and placed great emphasis on elucidating and interpreting symbols, since these, he believed, mainly represented the memory of mankind in the individual; June 7, in Zurich, Switzerland.

Dr. Francis M. Pottenger, 91, an authority on tuberculosis, was founder and director of the Pottenger Sanatorium, Monrovia, California; he was a past president of the American College of Physicians and emeritus professor of medicine, University of California Medical School; June 10, in Los Angeles.

Dr. Le Roy H. Sloan, 68, chief of medical services at Illinois Central Hospital; he was a past president of the American College of Physicians, a master of the College, and a former chairman of the Joint Commission for Accreditation of Hospitals; in Duneland Beach, Indiana.

Dr. Victor B. Seidler, 73, director, surgery, Mountainside Hospital, New Jersey; he was a founding member of the American Board of Surgeons and a past president of the New Jersey Surgical Society; June 12, in Montclair, N. J.

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CHIROPRACTORS AT WORK

Morris Fishbein, M.D.

A recent report by the Stanford Research Institute* describes and analyzes various aspects of chiropractic in California with a view to determining its significance in the practice of healing in that state. More chiropractors practice in California than in any other state. Peculiarly, there are about twice as many chiropractors in Southern California, with ten counties, as in Northern California with 48 counties. By contrast, physicians are more evenly distributed in California, with 43 per cent in Northern California and 57 per cent in Southern California.

Perhaps the sociologists and the psychiatrists will be able to determine the reasons for the concentration of chiropractors in Southern California. The migration into Southern California of elderly people with money and with chronic complaints, who are retired from active work and bored by the difficulties of passing their time, is probably part of the answer.

The Healing Arts

A statewide survey revealed that 3.6 per cent of California patients are seen by chiropractors, although chiropractors comprise 16 per cent of all who practice healing in the state. The osteopaths who comprise nine per cent of healers attend 9.3 per cent of illness, and physicians who represent 75 per cent of all in the healing arts attend 87 per cent of all illnesses.

Forty-seven per cent of all the conditions seen by chiropractors are directly related to bones, joints (including the spine) or muscles. One third of all chiropractic patients are elderly people with sore backs or joints, and more than half are working adults with chronic conditions.

Chiropractic fees vary from $4.50 to $6.50 per visit. When x-rays are used—about a third of the time—the fee is about $15. Chiropractors work an average of 39 hours a week compared to 60 hours for physicians. In California, 40 per cent of the chiropractors surveyed saw fewer than ten patients a day compared with 25 patients seen by the average GP.

As for equipment, 23 per cent of the chiropractors have x-ray equipment and 12 per cent use a device called the neurocalometer, which is designed to measure differences in temperature on opposite sides of the spine. (The differences are alleged to be caused by the pinching of spinal nerves.) Eight per cent use an inhalation apparatus—an ozone generator—which produces the gas while alternating tubes glow red and blue like a neon sign. And about four per cent of the chiropractors have a radionic machine which is incapable of detecting or measuring any form of radiation, ionic or otherwise.

The report offers a mass of information about the operation of California's three chiropractic schools, all in Los Angeles, as well as about types of chiropractors. They vary from "straight chiropractors" who use only the hands in eliminating nerve interference in the spinal column to "mixers" who employ light, heat, electricity, water, vitamins, some drugs, and who, on occasion, even practice obstetrics or range far afield to serve as marital counselors.

An aspect of chiropractic which causes great concern to public health officials is the use of x-ray without adequate protection to the testicles and the ovaries, and the ultimate influence of this practice on the production of infants with congenital malformations. X-ray is a potent force—too potent to be used by those improperly qualified.

Morris Fishbein

**Chiropractic in California*: A Report by Stanford Research Institute, Southern California Laboratories, South Pasadena, California. Obtainable from the Haynes Foundation, 607 South Hill Street, Los Angeles. Price: $5.00.